

# Technology Review

Edited at the Massachusetts Institute of Technology

July 1966

Julius Adams Stratton,  
The Eleventh  
President of M.I.T.

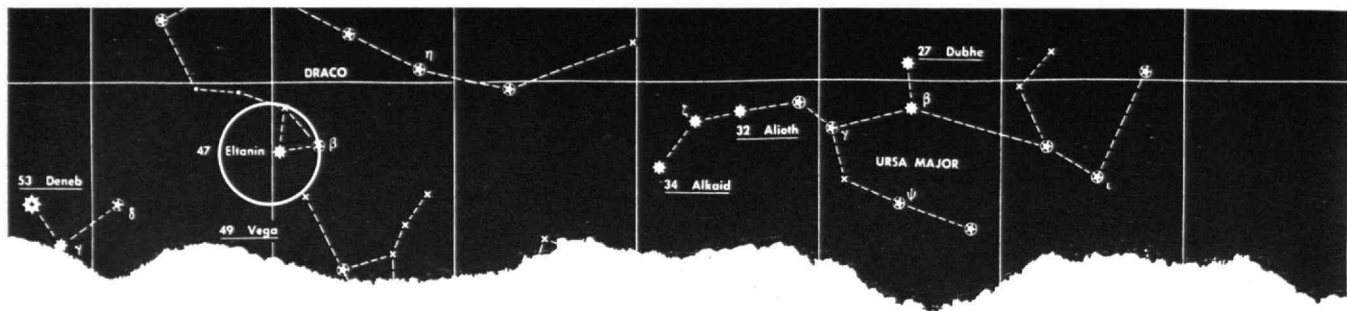


# technology review

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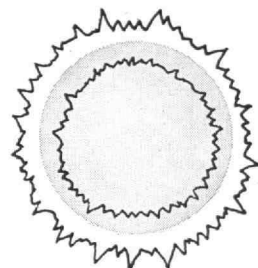
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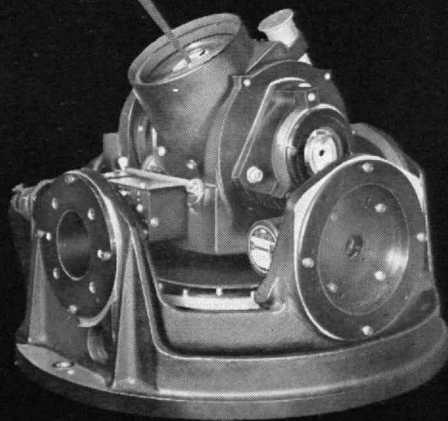
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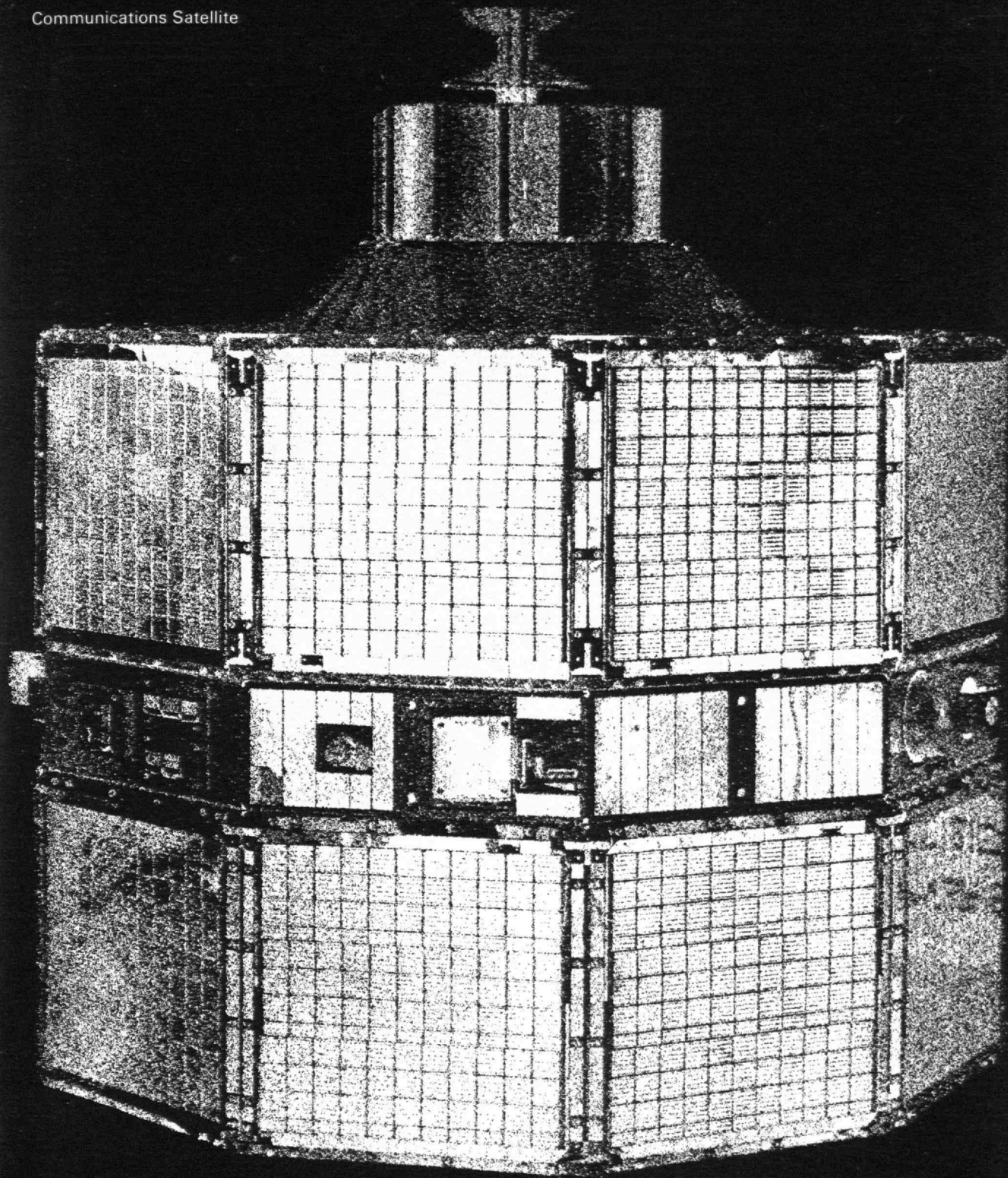
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A description of the Laboratory's work will be sent upon request.



# DASH



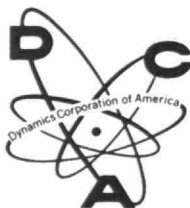
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With the retirement of Dr. Julius A. Stratton as the 11th President of M.I.T., The Review this month presents summaries of the background and achievements of his leadership.

In keeping, the cover this month is a photograph of sculpture of Dr. Stratton by the Boston artist, Beatrice Paipert (See "Portrait of a President," page 39).

M.I.T.'s First Family 19

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38 years of distinguished contributions . . . ' 20

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This issue concludes Volume 68. Number 1 of Volume 69 will be issued October 27, 1966. An index of Volume 68 is being prepared and will be sent to readers requesting it.





## New Provost

Jerome B. Wiesner has been appointed M.I.T. Provost succeeding Charles H. Townes, who has asked to be relieved of major administrative duties in order to concentrate on scholarly work as an Institute Professor. Howard W. Johnson, President-Elect of M.I.T., said Dr. Wiesner would be the senior academic officer reporting to the President and would have responsibility for interdisciplinary activities of the Institute's five schools.

"Throughout the period of his academic leadership, Dr. Townes has made outstanding contributions to the progress of the Institute," President Julius A. Stratton, '23, said.

"Drawing upon an incomparably wide and penetrating knowledge, not only of science and engineering, but of the whole range of other fields with which M.I.T. is involved, he has labored unceasingly to achieve the highest goals for the Institute. His constant concern for academic excellence will leave a lasting mark on the quality of this institution," he said.

Dr. Wiesner has been dean of the M.I.T. School of Science for the last two years and will continue to serve in that capacity until a new dean is appointed. A graduate of the University of Michigan, he came to M.I.T. in 1942 as a member of the staff of the Radiation Laboratory. He was appointed to the Department of Electrical Engineering Faculty in 1946, became director of the Research Laboratory of Electronics in 1952 and was acting head of the Department of Electrical Engineering when, in 1961, he went on leave to serve as Special Assistant for Science and Technology to President John F. Kennedy and President Lyndon B. Johnson. He returned to M.I.T. in 1964.

Dr. Townes, a former professor of physics at Columbia University, was appointed provost and professor of physics at M.I.T. in 1961. He shared the Nobel Prize for physics in 1964 for the development of the maser and the laser.



DR. WIESNER

## At Computation Center

William B. Kehl, '54, has been appointed associate professor of electrical engineering at M.I.T. and associate director of the M.I.T. Computation Center. He will direct large-scale expansion of the center's computational facilities.

Professor Kehl came to M.I.T. from the University of Pittsburgh where he was chairman of the Department of Computer Science and director of the Computation and Data Processing Center.

Professor Kehl was graduated from Harvard College in 1940. He holds two master of arts degrees from Harvard, in music and in mathematics. He taught mathematics at Georgia Institute of Technology and was at M.I.T. from 1948 to 1956, first as a mathematics instructor and later as head of a mathematical analysis group at the M.I.T. Instrumentation Laboratory.

The M.I.T. Computation Center serves research workers at 54 New England colleges and universities besides M.I.T.

## To Head Department

John Ross, '51, has been appointed professor of chemistry at M.I.T. and, for a five-year term, as head of the Department of Chemistry.

On leave from the faculty of Brown University, Dr. Ross has been Visiting van der Waals Professor at the University of Amsterdam this spring.

Dr. Ross is a physical chemist with research interests in statistical mechanical theories of equilibrium and nonequilibrium phenomena in classical and quantal systems. He has pioneered in experimental studies of viscosity of gases and chemical kinetics of molecular beam techniques.

Born in Vienna, Austria, he came to the United States in 1940 and served in the U.S. Army during World War II. He received the S.B. degree in 1948 from Queens College and the Ph.D. degree in 1951 from M.I.T.

Dr. Ross was a National Science Foundation Fellow in 1952, a Guggenheim Fellow in 1959, and a Sloan Foundation Fellow from 1960 to 1964.

## Professor of Physics

Herbert S. Bridge, '50, research physicist in the Laboratory for Nuclear Science, has been appointed professor of physics at M.I.T.

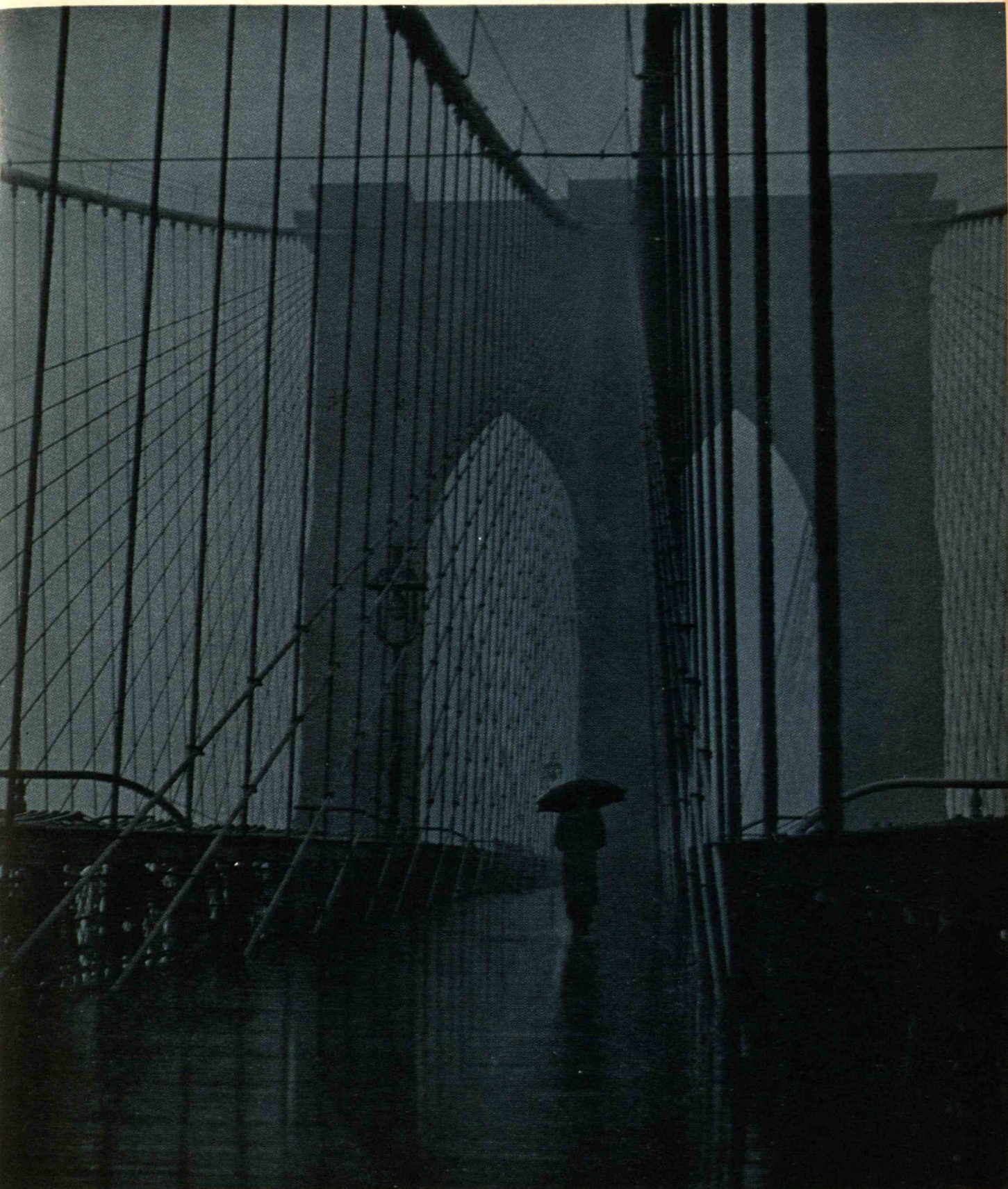
Dr. Bridge has received wide recognition in recent years for his outstanding work in solar plasma detection and analysis and has been one of the principal investigators in seven solar plasma experiments launched into space by the National Aeronautics and Space Administration.

A native of Berkeley, Calif., he received the B.S. degree in 1941 from the University of Maryland. He was at the Los Alamos Scientific Laboratory in New Mexico from 1943 to 1946 when he came to M.I.T. to join Professor Bruno Rossi's Cosmic Ray Group. He received the Ph.D. degree in physics from M.I.T. in 1950 and was a visiting scientist at CERN in 1957-1958.

(Continued on page 7)



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(Continued from page 4)

## Faculty Notes

*John F. Breedis*, Assistant Professor of Metallurgy, has won the Rosster W. Raymond Award of the American Institute of Mining, Metallurgical and Petroleum Engineers. . . . Professor *Edward H. Bowman*, '46, was elected a Director of the Bay State Milling Company.

Professor *Harry C. Gatos*, '50, has been named a Fellow of the American Academy of Arts and Sciences. . . . Visiting Institute Professor *Arthur R. Kantrowitz* has been elected a member of the National Academy of Sciences.

Professor *Thomas B. King* is a Director for 1966-1967 of the American Institute of Mining, Metallurgical and Petroleum Engineers. . . . Professor *Richard C. Lord* has received the SSP Award of the Spectroscopy Society of Pittsburgh.

Professor *John C. Sheehan* has been appointed Chairman of the American Chemical Society's Committee on Grants and Fellowships and a member of the Society's Committee on Education and Students. . . . President *Julius A. Stratton*, '23, and Professor *Antoine M. Gaudin* have been re-elected to membership in the National Academy of Engineering Council.

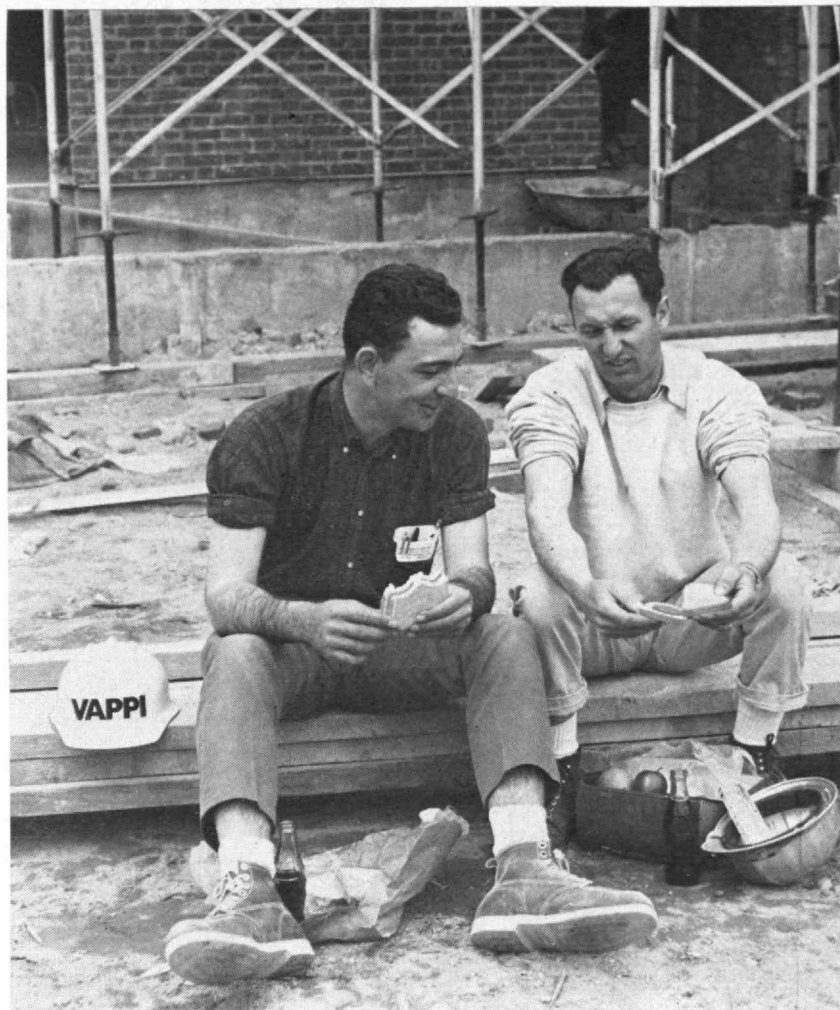
Provost *Charles H. Townes* has been elected Vice-president of the American Physical Society. . . . Dean *Jerome B. Wiesner* has been named a nonresident Fellow of the Salk Institute for Biological Studies.

## Postdoctoral Study

Samuel J. Williamson, '61, a staff member at the National Magnet Laboratory, is one of 15 young scientists selected to participate during the next academic year in the Postdoctoral Research Program supported by the Air Force Office of Scientific Research (AFOSR).

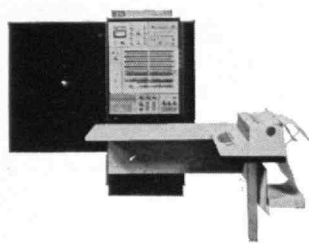
Dr. Williamson, a native of Sayre, Pa., received his B.S. and doctoral degrees in physics from M.I.T. He expects to pursue his postdoctoral research at the University of Paris, France.

(Continued on page 8)



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**I**NDIVIDUALS NOTEWORTHY

(Continued from page 7)

**Arthur C. Cope: 1909-1966**

Arthur C. Cope, Camille Dreyfus Professor in Chemistry and Head of the Department of Chemistry from 1945 to 1965, died last June 4 in Washington, D.C., while dining with associates of the American Chemical Society. Internationally recognized for his distinguished research in organic chemistry and for his outstanding contributions to the advancement of the profession, he was chairman of the board of directors of the ACS and had gone to Washington to preside at a board meeting and to attend meetings of the Committee on Science and Public Policy (COSPUP) of the National Academy of Sciences.

Dr. Cope was for many years a principal officer of the ACS. He was first elected to the board of directors in 1951 and in 1959 he was elected chairman, a post he had held continuously except in 1961, when he was society president. He was elected to his seventh term as chairman of the board last January.

Born in Dunreith, Ind., in 1909, he received a B.S. degree from But-

ler University in 1929 and was awarded a Ph.D. from the University of Wisconsin in 1932. From 1932 to 1934 he was a National Research Fellow at Harvard.

In 1934, he went to Bryn Mawr College as associate in chemistry. In addition to teaching he did research on condensation and alkylation reactions, discovering the reaction now known by his name that involves rearrangement of allyl groups in a three-carbon system.

Dr. Cope came to M.I.T. in January, 1945, as Professor of Organic Chemistry and Head of the Division of Organic Chemistry and in July of that year became head of the Department of Chemistry. He began research on cyclic polyolefins and worked initially with cyclooctatetraenes. In 1952 he observed the first transannular reaction of medium-sized ring compounds and since that time had continued to work in this area, which involves studies of proximity effects of various substituents.

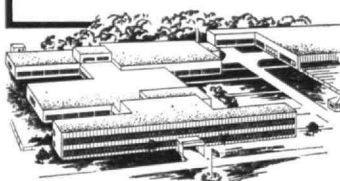
He served as Head of the Department of Chemistry until July 1, 1965, when he was appointed the first Camille Dreyfus Professor in Chemistry.

Dr. Cope's research in organic chemistry brought him numerous awards and honors. In 1944, he received the ACS Award in Pure Chemistry for his contributions in the fields of synthetic organic chemistry and molecular rearrangements. In 1958 he was presented with the annual Charles Frederick Chandler Medal by Columbia University for his pioneer work on the chemistry of medium-sized ring compounds and for his recognition of transannular reactions.

He is survived by his wife, the former Harriet Thomas Packard, and a stepson, Gregory, age 10.

(Continued on page 10)

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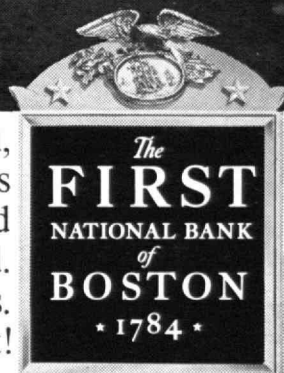


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## **I**NDIVIDUALS NOTEWORTHY

(Continued from page 8)

### New Professorships

**Professor Hoyt C. Hottel, '24**, an authority on combustion, will be the first Carbon P. Dubbs Professor of Chemical Engineering at M.I.T.

The professorship was founded with a \$500,000 endowment in honor of the late Carbon P. and Bertha E. Dubbs by their three children: Carbon C. Dubbs, '35, of Santa Ana, Calif.; Mrs. Jean Dubbs McAdams of Newton, Mass., wife of William H. McAdams, '17, M.I.T. Professor Emeritus of Chemical Engineering; and Mrs. Bertha Dubbs Cardinal, wife of Daniel E. Cardinal, Jr., of Northbrook, Ill.

Professor Hottel has been associated with M.I.T. since he came to the Institute as a graduate student after receiving the A.B. degree from Indiana University in 1922. He has been director of the Fuels Research Laboratory since 1934 and, as chairman of the M.I.T. Research Com-

mittee on Solar Energy, was in charge of building three experimental houses heated by the sun.

Pioneering research by Professor Hottel served to put the design of large oil and steam plant furnaces on a sound scientific and engineering basis, especially the design of cracking coil furnaces for the petroleum industry.

A member of the National Academy of Sciences, Professor Hottel has served on a number of committees concerned with important national problems, including the Academy's Fire Research Committee, which has made studies of how to deal with large fires such as forest fires, and the fire storms that would follow nuclear explosions in cities.

Professor Hottel received the S.M. degree from M.I.T. in 1924 and joined the Faculty in 1928. He is on a sabbatical leave of absence this year at Harvard University, where he is completing the manuscript of a book on radiative transfer.

• • •

**Thomas K. Sherwood, '24**, has been appointed as the first Lammot du Pont Professor of Chemical Engineering at M.I.T. The chair was established by a \$500,000 gift by members of the family of the late Lammot du Pont, '01, who was president of E. I. du Pont de Nemours & Co. from 1926 to 1940 and later chairman of the board.

Professor Sherwood is one of the world's authorities on fluid flow and mass transfer. His book, *Absorption and Extraction*, published in 1937, was the first significant text in its field and, with later revisions, has continued to be the leading textbook.

Dr. Sherwood was graduated from McGill University in 1923 and received the Sc.D. degree from M.I.T. in 1929. He joined the M.I.T. Faculty in 1930, became professor of chemical engineering in 1941, and was dean of engineering from 1946 to 1952.

### Honorary Degree

Julian W. Hill, '28, a member of the original research team that developed nylon, received an honorary Doctor of Science degree from Kenyon College in May. Dr. Hill retired from E. I. du Pont de Nemours & Co. in 1964.

(Continued on page 15)

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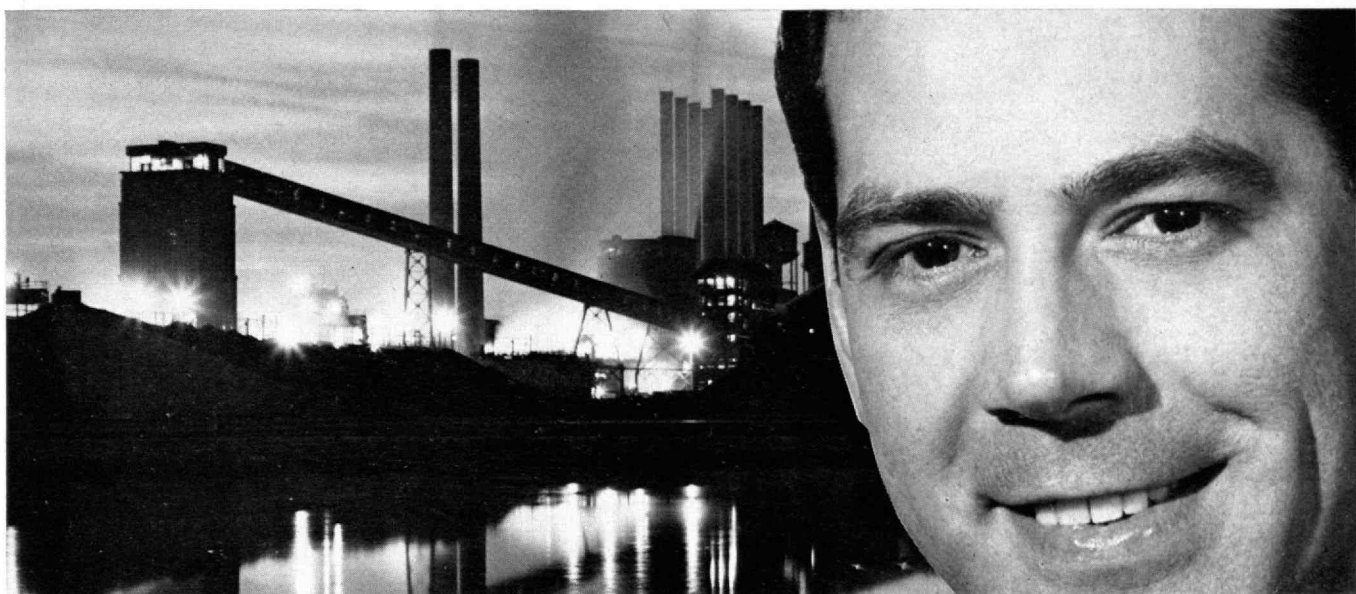
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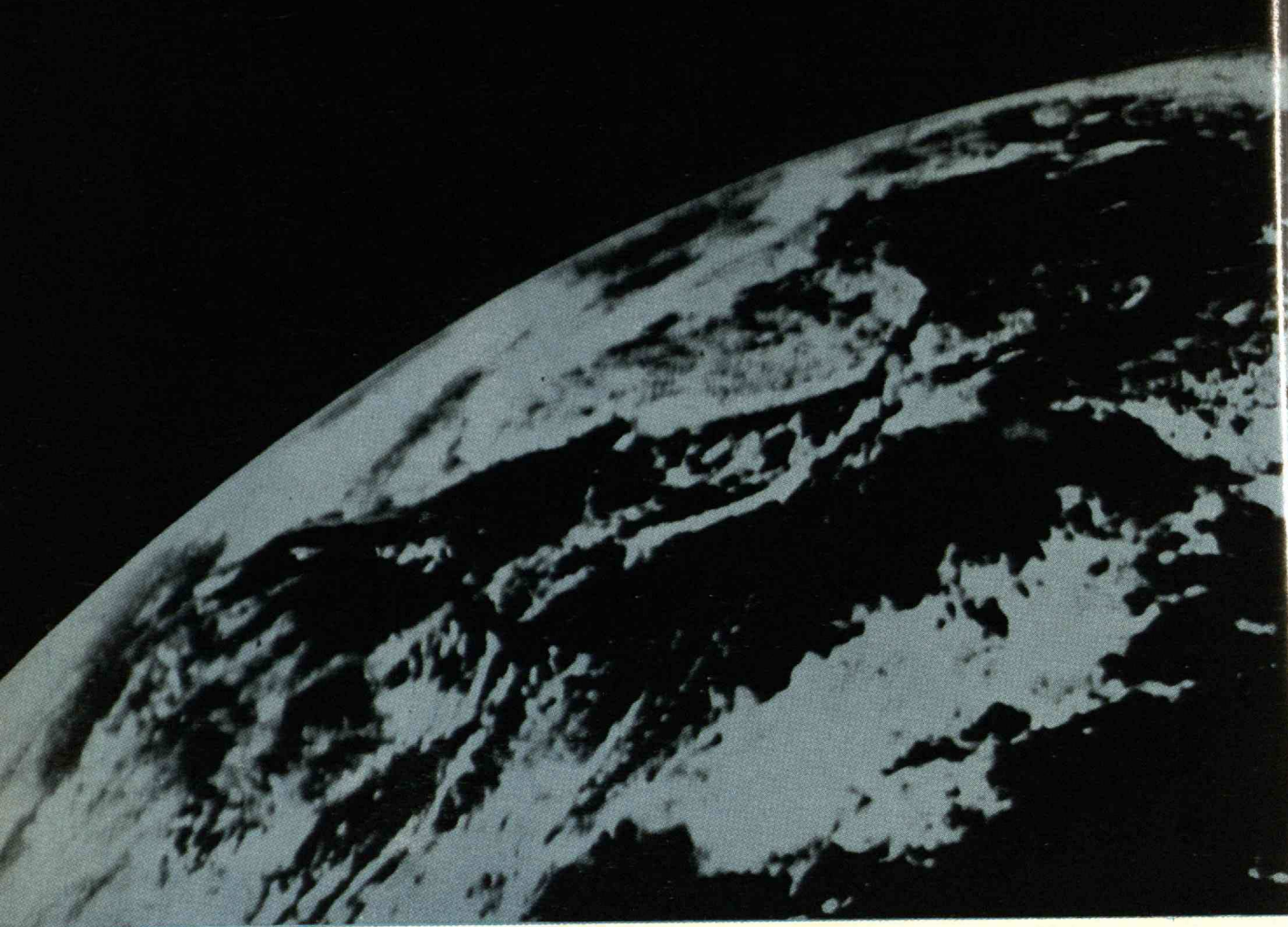
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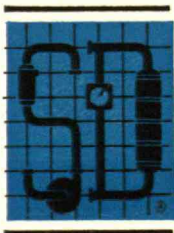
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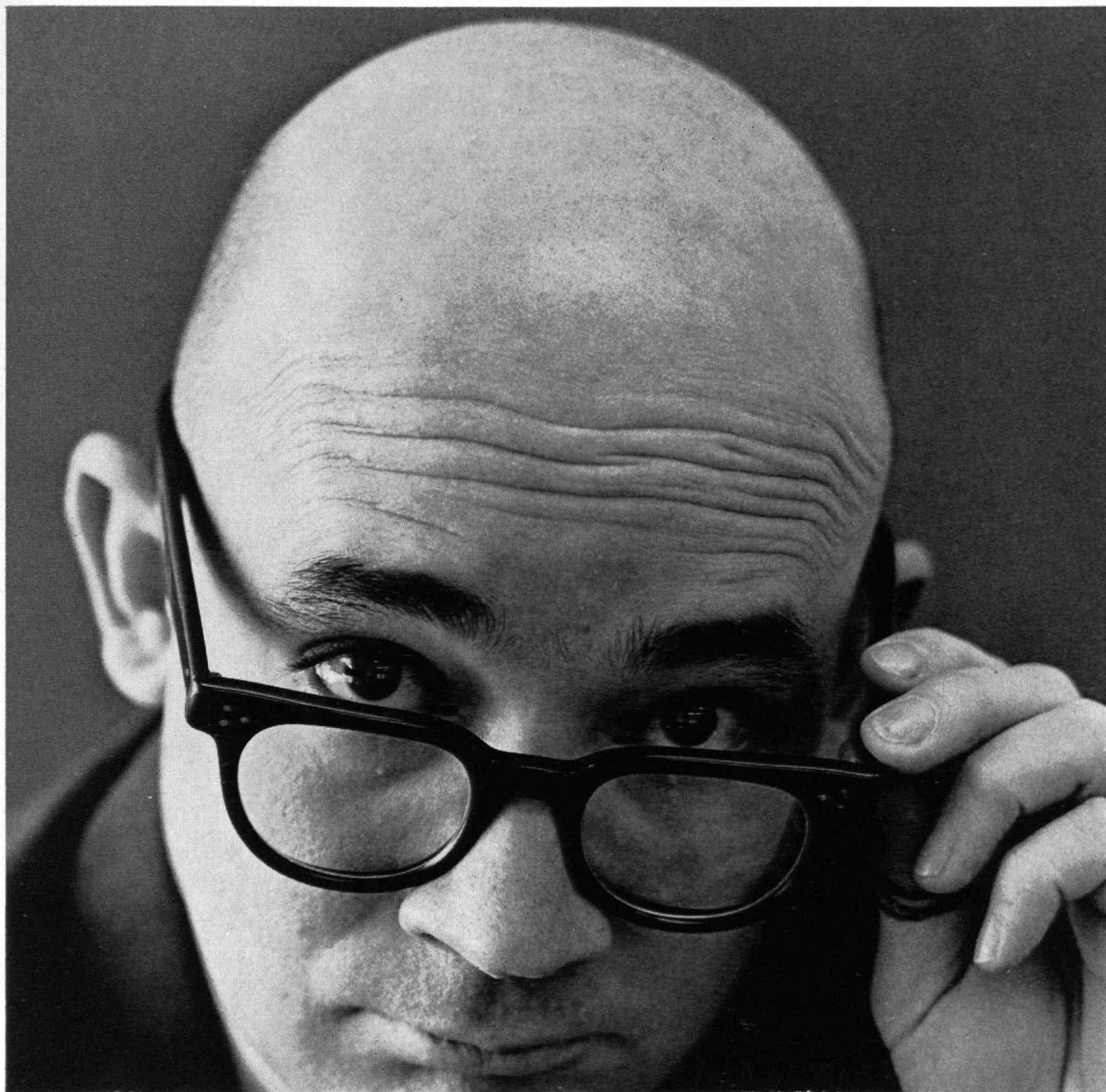
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(Continued from page 10)

### William Radford: 1909-1966

Professor William H. Radford, '32, Director of Lincoln Laboratory and an eminent member of the M.I.T. Faculty, died on May 9. In the 35 years since he came to M.I.T. as a graduate student he had made important technical contributions in the broad field of communications.

Born in Philadelphia in 1909, Professor Radford received the bachelor's degree from Drexel Institute in 1931 and the S.M. degree from M.I.T. in 1932. He joined the Faculty in 1941.

During World War II Professor Radford was a consultant to the National Defense Research Committee and was in charge of projects involving radio and electronics. He assisted in establishing the wartime M.I.T. Radar School and became its associate director in 1944.

Professor Radford had been associated with Lincoln Laboratory since its establishment in 1951 and was the first head of the Communications and Components Division, where he was responsible for the development of tropospheric and ionospheric radio communications essential to the DEW Line and the SAGE System. The planning of the Millstone Hill complex for high-power radio and radar communications centered in his division, and he later guided the West Ford experiments.

Professor Radford was a member of the Army Research and Development Council, chairman of the Electronics Panel of the Air Force Science Advisory Board, and had served as a consultant to the President's Science Advisory Committee.

Surviving Professor Radford is his wife, the former Pauline Newington, of South Dartmouth, Mass.

### Dr. Bush Honored

The National Academy of Engineering has awarded its first Founders' Medal to Vannevar Bush, '16, Honorary Chairman of the M.I.T. Corporation and Director of the wartime Office of Scientific Research and Development.

(Continued on page 16)

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## **I**NDIVIDUALS NOTEWORTHY

(Continued from page 15)

### Appointed Professor

Dr. Jerome Y. Lettvin, '47, has been appointed professor of communications physiology at M.I.T., with Faculty association in both the Department of Biology and the Department of Electrical Engineering. He will continue to lecture in the Department of Humanities where he has taken an active part in courses dealing with the biological basis of perception and knowledge.

Dr. Lettvin has been associated with the Research Laboratory of Electronics and the Department of Biology since 1951. He and his colleagues have carried out research on the bioelectrical processes involved in cognition and sensory perception in living systems and he is widely recognized for his work on frog vision and pattern recognition.

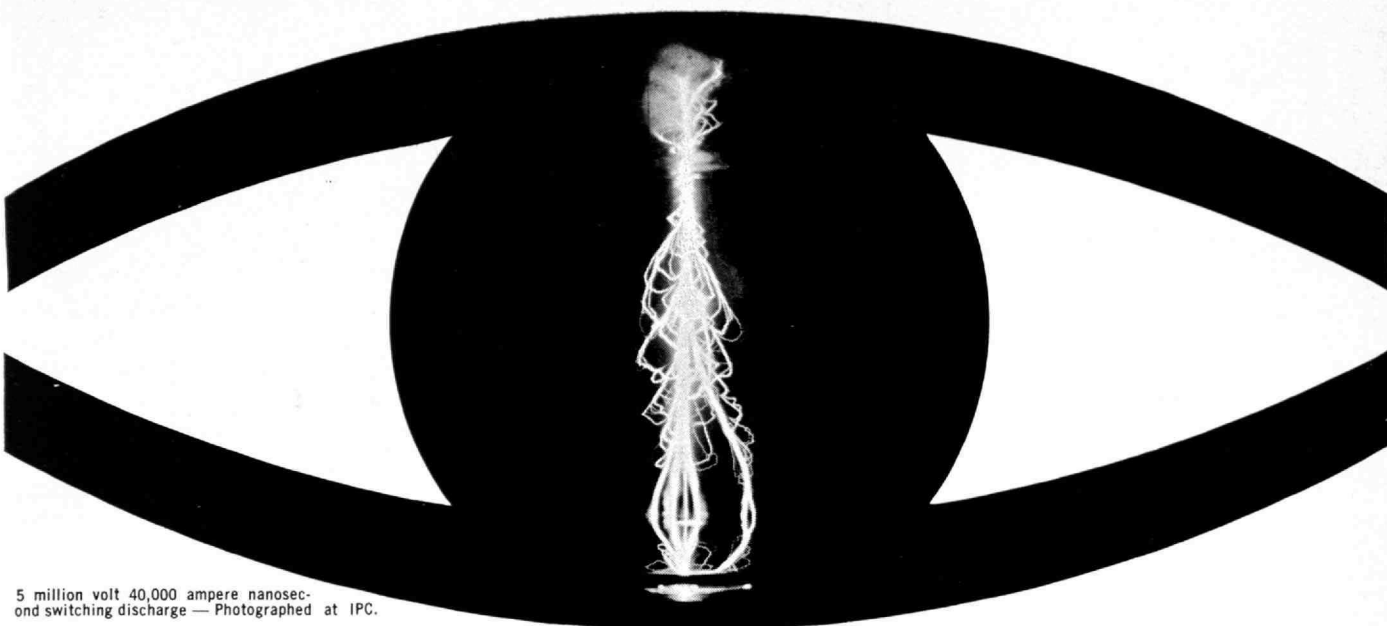
Dr. Lettvin's work combines a background in medicine, psychiatry, biology, and instrumentation. A native of Chicago, he received the B.S. degree in 1942 and the M.D. degree in 1943 from the University of Illinois. He was an interne at Boston City Hospital on the Harvard Nerve Service and, from 1944 to 1946, he served in the U.S. Army as head of neuropsychiatry at the 237th General Hospital in Europe. He was neurologist at the Veterans Administration Hospital in Boston (1946-1947), a member of the motion sickness project at the University of Rochester (1947-1948), and senior psychiatrist at the Manteno State Hospital in Illinois (1948-1951).

Dr. Lettvin holds certification by the American Board of Psychiatry and is a member of the American Academy of Arts and Sciences and the American Physiological Society.

### Ferre Honored

Luis A. Ferré, '24, Puerto Rico's leading industrialist and philanthropist, received the honorary Doctor of Civil Law degree from Pace College, New York City and Westchester, during its 58th commencement exercises held at Philharmonic Hall in Lincoln Center last month.

(Continued on page 67)



5 million volt 40,000 ampere nanosecond switching discharge — Photographed at IPC.

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☐ High power FLASH X-RAY and PULSED ELECTRON BEAM programs have led to the investigation of megavolt electron FIELD EMISSION SYSTEMS and the development of ELECTRON OPTICAL TECHNIQUES for the design of very HIGH CURRENT GUN STRUCTURES. Current studies involve the DIAGNOSTICS of PLASMA SYSTEMS generated with magnetically self-focused electron streams. This unique energy source has opened A NEW FIELD OF INVESTIGATION with unusual RESEARCH opportunities for original work.

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M.I.T.'s First Family: Dr. and Mrs. Stratton with their daughters Cary, a senior at Radcliffe; Cay, who is with ABCD (Action for Boston Community Development); and Laurie, a sophomore student at Vassar College.

# 'THERE FOLLOWED

By Edward L. Bowles, '22

*Edward L. Bowles and Julius A. Stratton both came to M.I.T. in 1920 and have been close friends and associates ever since. Together they shared the intellectual excitement of an advanced mathematics class taught by Norbert Wiener. And Edward Bowles, who also taught while he was studying for his master's degree, suggested and supervised Julius Stratton's bachelor's thesis on the calibration of wavemeters.*

*Professor Bowles later became head of the Division of Electrical Communications in the Electrical Engineering Department and director of the Round Hill research program. When Dr. Stratton returned from studies in Zurich he became "a mainstay" of both groups. They collaborated in research on air navigation in fog, and on revisions of the Electrical Engineering curriculum to coordinate texts and materials. When Professor Bowles went to Washington in World War II as scientific adviser to the Secretary of War, he called in Dr. Stratton to take over responsibilities in the field of radar.*

*Professor Bowles has been active in industry for many years and he returned to M.I.T. in 1946 as Consulting Professor of Electrical Communication and later in 1952 as a Consulting Professor in the then newly formed school of Industrial Management; he became professor emeritus in 1963.*

*Against this background, the editors of The Review asked Professor Bowles to write this biographical prelude to a distinguished career.*

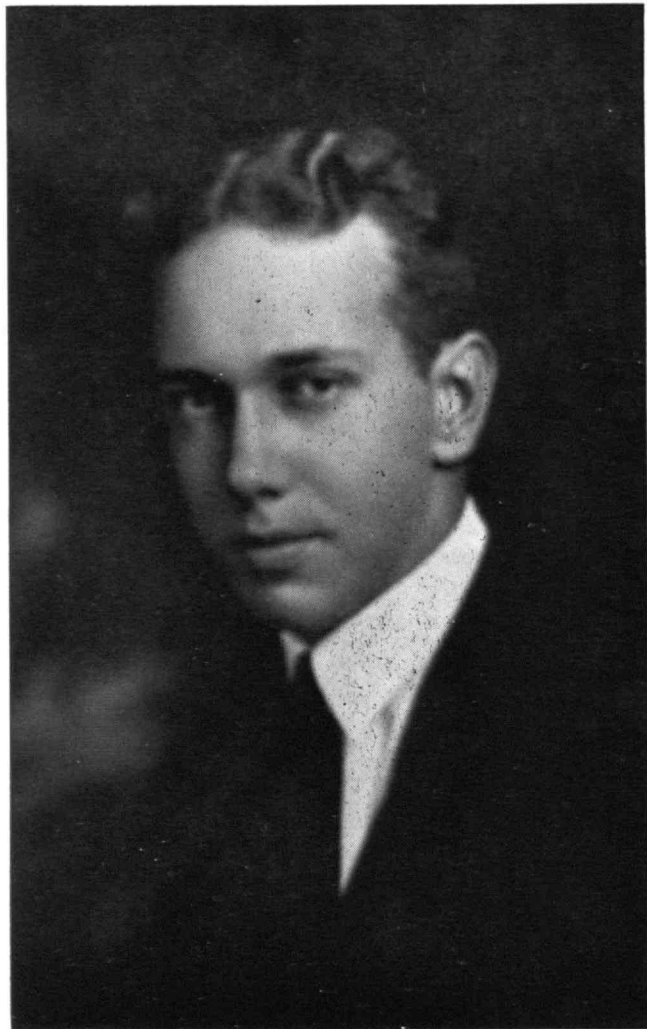
# 38 years of distinguished contributions to M.I.T.'

The retirement of President Julius A. Stratton marks the end of an era of leadership of enormous import to the Institute. His unusual background, a true sublimation of scientific, engineering, and cultural assets coupled with a consummate craftsmanship, has brought to M.I.T. a quality of breadth historically unique in technological institutions.

It is fortunate for us all that this record now stands in permanent form as an exemplary portrayal of the man, his ideas, his ideals, and above all his reflections on contemporary M.I.T. and its ultimate destiny. What is not before us except in fragmentary form is that mneume that has nourished so handsomely and shaped so fortuitously the various facets of his public service.

Fortunately for the record, Dr. Stratton has taken an active role during his tenure as president and he is known nationally and internationally in scientific, engineering, and educational circles through his many addresses, and his numerous pieces of prose in the form of commentaries, historical notes, and in what must for their literary style and content be classed as essays. Not often does one find a mind, particularly a technical mind, so felicitous in artistry of expression. Even less often does one find a mind of technical bent so endowed with breadth of interest and cultural assets.

Stratton registered as a student at M.I.T. in the fall of 1920. He chose the field of electrical engineering although, because of his early interests, conceivably it could as well have been chemistry or chemical engineering. That he came to M.I.T. from the University of Washington after a year of study there, rather than entering Stanford, as originally planned, was the result of accident—not initial choice or deliberate foresight. Manifestly, by hindsight, the loss was Stanford's.



JULIUS A. STRATTON of the Class of 1923



For the most part his first exposure to M.I.T. was disillusionment, yet in this very disillusionment there were compensations both in ultimate satisfaction to him and, apparent today, to the Institute. In order better to understand the reasons for his disillusionment, one must know something of Stratton's pre-M.I.T. background and, just as important, the nature of the Institute at that critical point in its history.

Forebears of both Stratton's father and mother, the Strattons and the Adams, were early settlers in New England. The Adams side was United Empire Loyalist-Tory. At the time of the impending Revolutionary War, they decided to withdraw from the Boston area, and went to Nova Scotia. They later moved west and Stratton's maternal grandfather, John, went first to San Francisco, then across the border in the 1850's to settle in Victoria.

The Stratton side of the family came to Gerry's Landing, now Watertown, Mass., around 1650. From there they moved, in successive generations, to Windsor on the Connecticut River, Bradford, Pa., then to southern Indiana, and finally to the Umpqua Valley in Oregon.

The move to Oregon was made by President Stratton's grandfather who took his eldest son in 1852 to New York, then by ship around the Horn to San Francisco. Thence he worked up the coast to the Umpqua Valley, where he laid claim to land, settled, and sent for the rest of the family who came by the traditional overland route. This trek took the group down the Ohio River to the Missouri, up the Missouri to St. Joseph, and then overland on the Oregon Trail. With them they brought a few precious articles, and above all the family Bible. The six-month journey was a truly rugged experience requiring fortitude and courage, especially for a mother and her family of 11.

The education available to her son, President Stratton's father, was primitive to say the least, depending heavily on individual will and aspiration. Later, the young man traveled to Portland and then to Salem, working as a printer at night and in time getting a formal education at Willamette University in Salem. He came to Seattle around 1888 (just after the great fire), studied law, and became a lawyer. At one point he served as a superior court judge, but he resigned presently to form the law firm of Stratton, Lewis and Gilman, which became well known throughout the West. These partners could not have been more different, one from another. As time wore on, Lewis became the famous "red-whiskered" U. S. Senator from Illinois, Gilman the legal vice-president of the Great Northern Railway. Stratton, from a different mold entirely, was the shy, scholarly type who, in the words of his eminent son, Julius Adams, should have been a college professor—"something one just didn't do in that part of the West in the 1880's."

President Stratton's mother, Laura, the daughter of a John Adams, was born in San Francisco in 1858. Nervous energy and enormous drive along with unusual talent carried Laura Adams Stratton to great heights as a

pianist, yet paradoxically it was a somewhat frail constitution and a high degree of nervous tension that kept her from withstanding the rigors of an intensive professional concert career. Somewhere in her early life, through her stepfather, a ship chandler, she undertook a trip to Australia on a windjammer, a venture that gives some measure of her energy and adventurous spirit. Later she taught music in San Francisco, and studied in the East and in Leipzig, Dresden, and Berlin.

President Stratton's father and mother were married in Seattle. Their only child, Julius Adams, was born 18 May, 1901. His mother had married at 43 and his father at 56, so that young Julius was to have his mind nurtured by parents considerably older than is normal, whose ways and experiences had set a pattern of relatively advanced maturity.

The father had been a systematic and avid reader of classical English literature, and knew Shakespeare literally by heart. This learning was augmented by a broad scholarly reading in the law. Naturally, therefore, to him history was human drama of the highest kind. Scholarly achievement was radiated, and by inheritance and exposure the son was a responsive, attuned receiver.

In addition to a household library of volumes reflecting advanced taste, there were leading periodicals, including above all the *Atlantic Monthly*. To the father, this literary monthly was the apotheosis of learning and authority, as the young son was soon to perceive. Reading aloud by his father was a constant source of joy to Julius Adams. The *Youth's Companion*, published by the Perry Mason Company in Boston, was a prime favorite in these evening sessions. So were the tales of the West which came out of the family history on both the father's and mother's sides.

The family being comfortably situated, the father decided to retire in 1906. His wife had spent many happy days abroad, particularly in Germany. So it was decided to return there by way of England. Here was

the opportunity for Mrs. Stratton to return to her music and to pursue her interest in art.

First came London, where Stratton senior reveled in the opportunity to visit firsthand the historic places that heretofore had been only images conjured up by an acute mind in reading. The very young Julius, subliminally at least, could not help but participate in this experience, particularly because it was the father's habit to take him on walks to the nearly myriad romantic spots suggested in the course of his consuming pursuit of literature. To appreciate the profound effect on young Julius one has only to reflect on the conjunction of this first experience in travel to a foreign country with the companionship of a capacious older mind with an uncommon zest for life.

Following the London sojourn came periods in Dresden, then Berlin, where Julius Adams was entered in kindergarten and school. He was thus afforded the opportunity—in fact the necessity—to master the German language in the easy way, i.e., when young.

It is characteristic that in one of the pensions where the family stayed, one of the German residents remarked, "This is the only American boy with whom we have had conversation who is shy."

The family returned to the United States about 1910. The old house in Seattle was repurchased; they remained for some 10 years, and here the boy completed grammar school and high school.

Early in this new period he experienced an awakening of interest in building things—elementary furniture, tree houses, and miscellaneous gadgets—an activity to be fortified subsequently by formal manual training. To this interest was soon added a new dimension, for he came by two books which stand out in his mind—do it yourself books, if you will. One of them was on chemistry, the other on electrical engineering, and he was soon to establish for himself a suitable laboratory on the top floor of their spacious home.

In this blossoming of technical interests, the young

About the time I entered high school, I first began to experiment with what in those days was called a "wireless set."

My receiver was a very simple affair: an aerial, a "loose-coupler," a pair of headphones—and a crystal detector. Even in 1914 the shelves of the public library offered some rather helpful books to satisfy the curiosity of a boy about electricity, and the monthly issues of the *Wireless Experimenter* provided a seemingly inexhaustible source of practical advice. So thanks to these I came to have a moderately clear understanding of how the whole thing worked—all of it, that is, except the crystal detector. On this one mysterious subject I found my books either evasive or quite incomprehensible. Many an evening I patiently explored the surface of a piece of galena with a fine silver catwhisker for the microscopic dots that would reward me with the clear, strong signals of some distant station. Galena was best, but for a long time I treasured an exceptional lump of iron pyrites. Then there was carborundum, which one jabbed with a steel needle—certainly a highly stable device, impervious to the effects of a nearby transmitter, but hardly more sensitive than a piece of coal. All in all, the early detector remained a cause of endless exasperation, belonging to magic rather than to science. When at last I was able to acquire my first de Forest Audion, my crystals were put away without regret.

—Foreword by Dr. Stratton to *Crystals: Perfect and Imperfect*, a Westinghouse Search Book, 1965.

man had the understanding support of his father who, although he had no technical knowledge of chemistry, physics, and electricity per se, was fully aware of the importance of these disciplines, and alert not only to their immediate significance but to their ultimate impact on the world of the future.

The onset of the radio age was now upon the world. With his flair for new experiences Julius was soon fusing wires, applying them to the igniting of firecracker fusing, then moving on to more glamorous manifestations. With the help of descriptive material of such periodicals as *Popular Electricity for Amateurs*, he was able to build Telsa coils.

Then came loose-couplers, crystal detectors, headphones, and ultimately signals from the Navy's powerful Bremerton station and from other contiguous Navy and commercial stations. Although the onset of World War I put a stop, at least officially, to the unauthorized reception of radio signals of government stations, our young radio expert remained undaunted in his efforts to learn. The ordinary bedspring, it turned out, was a worthy competitor of the sprawling, awe-inspiring outdoor antenna of that day.

One should report, too, that it was during this period that Julius' mother was determined that he should master the piano. There must be a systematic effort. So it was that at five-o'clock, when other playmates were having their pre-dinner games, piano exercises were in order for Julius. Somehow the young man resisted his mother's efforts with energy and splendid stubbornness, and he won.

The War years 1917-1918 brought Julius face to face with the usual conflicts for a young man with respect to military service. He was 16 and the country was in dreadful need of radio operators, so he went to YMCA night school to learn the continental code and other essentials to qualify for an operator's license. In the meantime, he served for a period as a riveter's helper in a local shipyard. By the time he passed his operator's examination, the war had ended.

Of course he wanted to go to college. He was graduated from high school, in his words, "with reasonably good grades." Although Yale was attractive and he had relatives who had studied there, he settled nevertheless on Stanford. He proposed to enter there in the fall of 1919. But what to do in the meantime? As one might surmise for a person of his heritage, he wanted adventure and travel. The urge was further excited by the works of Conrad, which fascinated him.

He had qualified as a radio operator—commercial, second grade, and received his license in February, 1919, and now he found a ship, a coastal freighter bound for San Francisco and points south. There were the spring and summer in which to travel and learn. Earlier he had been tempted to ship on a yearly run on a fur-trading ship touching, among other northern points, at Kamchatka. However, the schedule would bring him back too late for Stanford. Though tempted also to find a ship going around the world, this too was

out of the question, and he settled for an apprenticeship as operator on a vessel of the Admiral Line, the *Admiral Dewey*. He served on her from the middle of April to the middle of June. On this voyage, he comments, he was a very seasick lad. Here was adventure, however modest it might be compared to the journeys of his forebears and compared to some of his own later treks up the Amazon.

Now he was looking for a summer voyage, and his imagination was captured by the opportunity to sail on a ship out of Seattle bound for Japan and North China. By this time he had qualified as a commercial radio operator—first grade, and he shipped as chief operator of the *Western Glen*, a freighter carrying a cargo of steel rails to the port of Dairen (Luta), for the Manchurian Railroad. The ship was 21 days in reaching Kobe, then went on to Osaka, and finally to cholera-infested Dairen where some 15 days were spent in unloading—a task done manually by coolie labor. On the return voyage the ship put in to Seoul, then set out for Japan for coaling. En route, the *Western Glen* ran into a typhoon. Another American vessel in the vicinity sent an SOS, which Stratton intercepted. Shortly he was watching a rescue operation at sea, with all its drama—including the axing of lines as attempts were made by Japanese craft to gain salvage rights to the stricken American vessel. The *Western Glen* itself nearly came to grief as it grounded several times shepherding the nigh-helpless ship dragging anchor in the storm.

After this harrowing experience, the *Western Glen* coaled at Kobe, and once more put to sea for the States. This voyage was soon interrupted when the high-pressure cylinder head of the triple expansion engine blew out. Literally, all hell broke loose on this fateful night, but the captain would have no SOS.

The vessel limped back to port and the radio operator was left to reflect on his shattered dreams of enrolling the next month at Stanford.

On debarking in Seattle, in the certification of his performance as a radio operator, Stratton drew a "very satisfactory," an endorsement duly inscribed on the back of his license at that time.

The belated return and university schedules left only the possibility of attending the University of Washington. In addition, Stratton faced the unexpected paradox of being determined to be an electrical engineer and yet believing that chemistry interested him more. In this frame of mind, Stratton met a fellow mathematics student named Weldon Pollock, who urged that Stratton go to Boston Tech, a place he had never heard of. After investigation, Stratton applied and was accepted at Boston Tech, and the following summer found himself posted as radio-operator—commercial, first class, on the *Eastern Pilot* out of Tacoma en route to Baltimore and New York; he arrived at M.I.T. by train from New York in late August, 1920.

Soon Stratton was to find himself heavily engaged in a battle of credits. At Seattle he had had an excellent

(Continued on page 61)



# Advance on Many Fronts . . .

Under the leadership of Julius A. Stratton, M.I.T. has advanced on many fronts, with major innovations in teaching and curriculum development; a growth in enrollment, scope, and Faculty strength; and a great rebuilding program.

Both a scientist and an engineer, Dr. Stratton has distinguished himself as an educator and administrator during the emergence of M.I.T., long a foremost technological institution, in the humanities and social sciences. Although the physical growth of the Institute has been the most visible evidence of change (new buildings costing more than \$40,000,000 have been erected in the last three years), Dr. Stratton has devoted much of his effort to educational advancement. As a member of a Faculty Committee on Educational Survey in 1947, he was one of the chief contributors to a two-year study of the Institute's educational philosophy. Many of the committee's recommendations have since been carried out—such as the establishment of a School of Humanities and Social Science, increased flexibility in curricula, construction of more on-campus housing, encouragement of extracurricular activities and social life for students, greater attention on the part of the Faculty to the development of educational policy, improvement of the Faculty salary scale to parity with that of comparable universities, and careful guidance of sponsored research. Revolutionary changes in the undergraduate curriculum, which became effective last fall are, in part, a reflection of the concepts of this committee.

After receiving his doctor of science degree in Mathematical Physics from the Eidgenössische Technische Hochschule in Zurich, Dr. Stratton returned to M.I.T. as assistant professor of theory of electricity and magnetism in the Department of Electrical Engineering. In 1931 he moved to the Department of Physics, became an associate professor of physics in 1935 and professor in 1941. He was also engaged during those years in research which led to the publication in 1941 of his book, *Electromagnetic Theory*, which is still regarded as an authoritative text and which has been translated into several languages.

Dr. Stratton was among the first staff members of the M.I.T. Radiation Laboratory, but in 1942 was detached to become an expert consultant in the Office of the Secretary of War. He organized a series of technical advisory committees on radar for the Air Force and assisted in the establishment of a development program for aids to all-weather flying. For his services he received the Medal for Merit from the Secretary of War.

As the time approached to disband the Ra-

diation Laboratory, a Basic Research Division was established under the direction of Dr. Stratton to continue fundamental research in physical electronics. In 1946 M.I.T. organized the Research Laboratory of Electronics to take over this research, and he became its first director. In 1949 he was appointed provost, his responsibilities including the co-ordination of the programs of interdepartmental laboratories. Later he became chancellor, serving as deputy to the president and administering the Institute's entire academic program.

During his years in the M.I.T. Administration the scope of the Institute's teaching and research program has grown enormously. Much of this growth has been in the interdisciplinary centers.

The Center for International Studies, established in 1951, brought together economists, political scientists, historians, and other experts on international affairs, and as provost Dr. Stratton was able to draw upon his experience with interdepartmental studies and government agencies to guide its organization. Other new centers have included the Computation Center, the Center for Earth Sciences, the Center for Life Sciences, the Center for Materials Science and Engineering, the Center for Space Research, the Center for Advanced Engineering Study, and (with Harvard University) the Joint Center for Urban Studies.

A member of the National Academy of Sciences, Dr. Stratton has served a term as its vice-president, was re-elected this year, and was chairman of the committee representing the Academy in the formation last year of the National Academy of Engineering. He is a member of the American Philosophical Society, and a Fellow of the American Academy of Arts and Sciences, the Institute of Electrical and Electronics Engineers, and the American Physical Society. He serves as a member of the National Science Board, the governing body of the National Science Foundation, and is a trustee of the Boston Museum of Fine Arts, the Carnegie Foundation for the Advancement of Teaching, and Vassar College. He is a director of Westinghouse Electric Corporation.

On January 1, 1966, in anticipation of his retirement from the presidency of M.I.T. on June 30, 1966, he became chairman of the board of trustees of the Ford Foundation. He has been a trustee of the foundation since 1955.

He has received the Certificate Award of the United States Navy (1957), the Medal of Honor of the Institute of Radio Engineers (1957), the Faraday Medal of the British Institute of Electrical Engineers (1961), and a number of honorary degrees.



*'The only security . . .*

*comes from complete*

*intellectual self-reliance . . .'*

## Julius A. Stratton: A PORTFOLIO

*Over the years, Dr. Stratton has become known for his perceptive and evocative comment on science, engineering, and education. Beginning on these pages, The Review presents a selection of excerpts from his writings and speeches, together with a collection of photographs of the president in his many and varied activities.*

A good many years have gone by since my first arrival at Tech but my experiences in those first few days remain as fresh in my mind as though I were one of you here this evening. I recall most vividly the September afternoon on which my train moved out of Grand Central Terminal on the way to Boston. I was coming from a distant city and I was about to enter M.I.T. It seemed very important to me just at that moment that I become an electrical engineer and I had been told that M.I.T., or Boston Tech as it was known in those days out on the Coast, was the place to go. Apart from that I had only the remotest concept of the kind of place that M.I.T. really was and only slightly less vague ideas of what constituted electrical engineering.

I remember well how I stared out of the window that afternoon, trying to catch glimpses as we sped along of the multitude of electrical facilities that line the right of way of the New Haven Railroad, feeling confident that before another year had elapsed I should be able to describe them all with professional assurance. Surely I would learn next year at Tech whether this was an AC or a DC system, what the voltage was on the overhead line, and how those feeders were tied in. Someone was going to tell me how those banks of transformers were connected together and I remember being curious about the design of those petticoats on the big insulators.

All this to me was electrical engineering and like generations of Tech students before me I had to learn slowly and painfully that engineering comprises vastly more than random technical information.—*from Welcome to Entering Students, September, 1950.*





... There isn't any one best educational system. There is no single prescription for the education of young men and women that is perfectly or equally satisfactory for each and every individual. But there are nonetheless two fundamental requirements for any academic program that is to prove successful. In the first place an effective plan of education must be related closely to the world, as it is in this age. Its objectives must be in harmony with the needs of our times and they must be designed to help men and women to enjoy happy, useful lives in the world of today. Secondly, a successful educational plan must take account of the special gifts and talents and aptitudes that differentiate one student from another. I want to place the utmost stress upon this importance of seeking out and cultivating individual qualities. Never in history has it been so essential to recognize the human worth of individuals if we are to retain the rich variety and color of our national life. There are a multitude of forces operating in the world today that tend to level and submerge us in the great mass of humanity. Against these leveling forces a good education should supply resources to defend the integrity and dignity of the individual mind and spirit.

These two principles then, that of a timely usefulness of objectives and the cultivation of individual worth, are the key to the philosophy that has been our guide here at M.I.T. for the better part of the past century.  
—from *Freshman Talk*, September, 1951.

A group from the Institute recently visited Dr. Stratton at his farm in South Newfane, Vt. When it came time to go, their bus wouldn't start, but Dr. Stratton got it going with a push from his tractor.

In this diversity of approach to the solution of educational problems lies our strength and our hope for the future. We must jealously guard this right to be different, and with this privilege goes an obligation to experiment, seek constantly after new and better methods in keeping with the changing requirements of our time.  
—from *Talk to Antioch Assembly*, April, 1954.

... As I reflect upon the several stages of my own professional career, I am again conscious that the rewards of teaching are so often elusive and intangible; but still it is in the interchanges between student and teacher that one finds the deepest human satisfaction. It is a distressing fact that great events of the past two decades—first the War, followed by an intense focusing of the national effort on security, and the consequent transfiguration of our whole industrial society—have swept many a born teacher out of the classroom into research, into industry, or saddled him with the burdens of administration. In my own life I take some comfort in the belief that to participate in the conduct of a university can and should be teaching on a grander scale.

For it seems to me that the great challenge to our generation lies in the reshaping of the plans and process of education to the needs of this age.—  
*from Address to Institute of Radio Engineers, March, 1957.*

... But there is still another task ... that in the long run may prove to be of even greater import to all of us as citizens of a modern state. I speak of the most urgent need to make the understanding of science—the appreciation of its power and limitations—an integral part of the education of that much larger body of men and women destined for other professions and occupations. It is the problem, in short, of bringing science adequately into the lives of the nonscientists.

It may well appear strange to you that one whose own efforts have been so firmly centered in the professional training of scientists and engineers should express this deep concern for the education of the many whose careers will lead them elsewhere. Earlier in these remarks I have tried to convey to you a feeling for the enormity of the change that is being wrought by science in our civilization. Even for those of us who through our professional interests are most intimately a part of the movement, it is difficult to grasp the full meaning of the tide that is sweeping us forward. If educated men and women are to act with wisdom and judgment on matters that touch them most deeply, it is imperative that they possess knowledge of the methods and principles of science, and a capacity to follow its broad lines of advance. Science can no longer remain merely a

casual course on the curriculum of a liberal education; it lies at the very heart of our culture and the schools, the colleges, and the universities must deal with it accordingly.

The problem is enormously difficult—the most challenging to education in our day. For as the world of science extends its boundaries, it appears ever more remote and forbidding to the average man. Our simple concepts of matter composed of electrons and protons are brushed aside by the physicists' talk of more than 20 strange and elementary particles. Because of the formidable language of the biochemists we have difficulty in comprehending the significance of recent theories on genetics, or in sharing new insights into the nature of cancer and mental disease. As the import of this marvelous flow of discovery in the daily lives of each and every one of us grows greater, the gulf of understanding between the specialist and the common citizen grows steadily deeper and wider.

We must bridge that gulf. We who are scientists and engineers by profession must not isolate ourselves from the great issues of the day, even though they may seem to lie outside our sphere of special competence. The very fact that science has become a dominant force in modern society imposes upon us a special obligation as citizens to share responsibility for the moral, political, and economic problems that beset us all. As teachers we must convey to our students an understanding that a readiness to minister to the public welfare is the hallmark of every great profession. As scientists, finally, we cannot afford to allow the world of science to become enveloped in mystery, a land accessible only to the privileged and the few. In the interest of science itself we dare not allow a cleavage to develop between scientists and the great body of educated people.—*from Address at St. Francis Xavier University, Antigonish, Nova Scotia, August, 1957.*



Dr. Stratton with Richard Cardinal Cushing, of Boston, at a meeting of the Tech Catholic Club in 1959.

To many of you of the graduating class this period of striving may have seemed interminable. As the years go on, it will shrink down to a few short links in the chain of life. As one looks back, all the rough places begin to smooth out—the trivial irritations, the small crises that loomed so large at the moment, the frustration over cums and quizzes—fade away, and one begins to see all this in the perspective of a life pattern—with the perspective of an Alumnus rather than a student.—*from Charge to the Graduating Class, M.I.T. Commencement, June, 1958.*

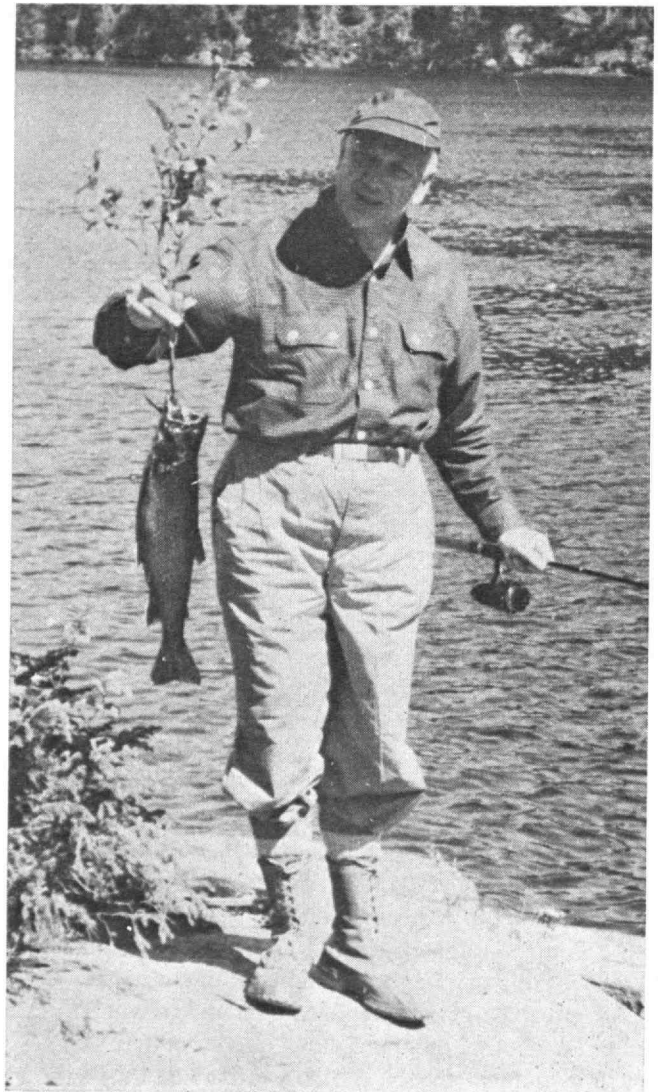
A university can't and mustn't try to do all things. It must conserve its resources and focus its efforts upon the most significant problems. But even these come quick and fast, and the university which fails to meet some of these challenges will soon be relegated to second-rate.

If this profusion of new knowledge represents a challenge to the university, it presents even more perplexing and difficult problems for the student. If the university must make choices as to the directions it will pursue, these choices are even more limited and difficult for the undergraduate. It isn't conceivably possible that a student today in science or engineering can cover the wide range of subjects that have a direct and important bearing on the field of his choice. Nor does he have the experience or the maturity to judge entirely for himself.

There has never been a time when the university had a greater obligation to give wise guidance to these young men and women upon whom we shall depend for our future technological strength.—*from Talk at Detroit Regional Alumni Conference, January, 1959.*

Science has a dual nature. It is indeed the foundation of all technology. But it gives us also the framework of philosophy. It is the reference point from which we inquire into the meaning of our existence and the nature of our universe and the limitations upon our powers.—*from Talk to M.I.T. Alumni in Worcester, March, 1959.*

*'There is a dignity  
and worth in all  
the works of science'*



On a summer's holiday—some angling and a fine catch.



There is now a second point that I should like to mention—an observation upon the recurring reference to the “useful” and the “useless.” Many . . . have spoken most eloquently about the importance of research as a path to understanding without concern for any ultimate utility. You were in fact speaking about the nature of scholarship itself, of its ennobling quality and its spiritual value. The idea that there is importance in learning and knowledge for their own sake is a difficult one for a pragmatic American public to grasp, but as we here express our support of this idea of pure scholarship and of pure research, let us do so without any belittling of the importance of other kinds of human activity. As I have listened to the discussion during the past two days, I have detected again and again an inclination to look down upon useful motives or actions. This I think is unworthy. There is a dignity and worth in all the works of science.

There are in fact two great qualities that distin-



At the 1957 Assemblies Ball, Dr. and Mrs. Stratton lead the Grand March.

guish man from the other animals. One is man's power of analytical thinking and of intellectual abstraction. The other is his propensity to act, to do, and indeed to transform his environment. This is the essential duality of man's existence—to think and to do. The power of thinking analytically would alone serve him little purpose were he then not able to act upon his intellectual conclusions.

The importance of research of any kind, pure or applied, within the confines of a university lies not simply in the advancement of knowledge, but also in the extent to which it serves to develop the creative powers of the student. It is precisely in this relation to the student that the function of research in a university differs from that of the industrial organization and the independent laboratories.—*from Remarks at Basic Science Symposium, May, 1959.*

The whole world is in ferment. Clearly your generation will be governed by conditions and circumstances that are totally unlike any that have ever prevailed before. This I truly believe.

As a consequence it must be our mission to give you an ability to compete in this rapidly changing and extremely serious world. Such ability will come only from a mastery of fundamentals. M.I.T. has an obligation to you far greater than that of simply introducing you to the state of engineering as it exists at the moment or to the current state of science, architecture, and management. It is our prime responsibility to give you principles and fundamentals of such depth that you can live and grow with technological change and become yourselves innovators and creators in a world in flux.

The only security that is of any account in this kind of world is the one that comes from complete intellectual self-reliance, the feeling that you have the ability to keep up with the frontiers if only you are prepared to make the effort, to take the initiative, to continue to move forward.—*from Talk to M.I.T. Freshmen, September, 1959.*

Any college that fails to cultivate the interests of its Alumni is neglecting the very roots of its support—not of money alone, but the firm, warm loyalty that can show itself in such countless ways.

And the Alumnus, in turn, who allows his ties to his college to weaken or break away is losing something of priceless value that he has rightfully earned and which might be a source of pride and profit to him all his life.—*from Remarks at Chicago Regional Alumni Officers' Conference, October, 1959.*

Far right: Dr. Stratton and President Nathan Pusey of Harvard break ground in 1957 for Cambridge Electron Accelerator. Immediate right: In academic procession to receive an honorary degree from Harvard in 1959.



*'... never again can we consider science  
and engineering as disciplines remote  
and apart from major concerns of mankind'*



M.I.T. is enveloped by a great city. We impose great demands upon the intellectual and emotional resources of our undergraduates. We have high hopes for these students of ours, and we should like to prepare them for the heavy responsibilities that will be theirs.

And so, increasingly, we have attached importance to all that a student learns through living as a member of this college community. From the maturing influence of a healthy campus life can come a wealth of experience and understanding gained through informal relations with faculty and through mingling with fellow students of a great diversity of interests and backgrounds.

Society asks of most men more than sheer intellectual ability—it demands also moral hardiness, self-discipline, a competitive spirit, and other qualities that in more old-fashioned terms we might simply call character. . . .—*from Remarks at Dedication of M.I.T.'s Du Pont Athletic Center, October, 1959.*

. . . The one, overriding lesson that we must draw from these observations is that never again can we consider science and engineering as disciplines remote and apart from major concerns of mankind. Henceforth the course of science in the United States is inextricably interwoven with our measures of defense and survival, with the economic status of our citizens, and indeed intimately related to every facet of a way of life that Americans have cherished most dearly.—*from Talk to M.I.T. Club of New York, December, 1959.*



... The comment has frequently been made that the genius of the American people is most clearly expressed through a mastery of technology and an extraordinary capacity for organization. Yet at the moment there are some signs that our power to devise and create great technological systems may have outstripped our capacity for management. Be that as it may, it is manifestly clear that engineering and management must be more and more tightly interwoven into the single fabric of our economic and political system. Neither the engineer nor the manager can proceed in isolation from the other, or in ignorance of the basic laws of physical and social science that are shaping the development of modern society.

For it isn't enough to approve *in principle* a better plan of education, a stronger defense, or a massive attack on the blight and decay that are the shame of our cities. We must give of ourselves—our time, our energy, and our money—to transform such hopes into reality. There *is* a way to achieve these things and *still* to balance the budget. But it is a way that demands its price, payable perhaps in some of the luxuries that contribute to our standard of living.

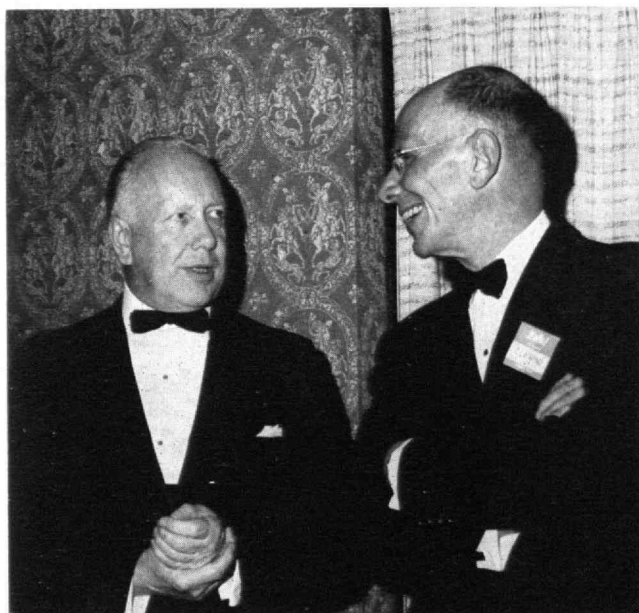
Obviously the question is, can our country, in the midst of such material ease, rise to the great moral and spiritual challenge that now confronts it. No other people in history, to the best of my knowledge, have met successfully a comparable test. Indeed we are told by Spengler and Toynbee that each civilization contains within itself the seeds of its own destruction. But I should like to believe that we have within us also in equal number the seeds of our own salvation: and that it rests with us as to which shall grow.

The most urgent need for Americans today, it seems to me, is a positive belief in some set of spiritual and intellectual values, a clarity of objectives, a sense of mission.—*from Remarks at M.I.T. Christmas Convocation, 1959.*

These are conditions that offer an unparalleled opportunity for M.I.T. There is, in fact, an obligation upon us because the national need for engineering management is so great. M.I.T. is evolving rapidly into a university of a form in harmony with the conditions of our epoch. Our mission is sharply and clearly defined. It begins with teaching and research in the most significant fields of pure science. We are then concerned with the useful application of science through the several branches of engineering. And finally our domain has expanded to embrace those fields wherein science and engineering bear most directly upon society and human affairs. Our approach to every problem is influenced by a sense of the quantitative, the analytic, the mathematical. For our full flowering as a great institution, we must also continue to cultivate with care and imagination the blending of art with science, as we find them expressed in the unity of architecture, in much of engineering, in economics and political science, in industrial relations, and in the whole of management.

In such a setting a School of Industrial Management finds its natural place. It belongs here, it is part of our plan, it draws substance from all the resources of the Institute, and it can count on our unqualified support.—*from Message in Industrial Management Review, School of Industrial Management, April, 1960.*





Left: Dr. Stratton meets the press during a visit last January to the Technical University of Berlin. Above, top: Dr. Stratton and Dr. Killian share a moment of amusement at commencement, 1964. Below: A chat with Clarence L. A. Wynd, '27, at a meeting of the M.I.T. Club of Rochester in 1963.

This, I believe, can be said for M.I.T.

We have learned much from other lands, but the institution that we have shaped comes out of our own traditions, our own national character and aspirations.

I don't believe that an M.I.T. can be transplanted or reproduced identically elsewhere—be it in Britain, or India, or Nigeria.

Each university is an expression of its own traditions, of its own cultural soil.—*from Welcoming Remarks, M.I.T. Centennial Conference, April, 1961.*

. . . Even within the past decade, the advance of science has been extraordinary. It is compelling us to re-examine both our methods of teaching and the content of our curricula. The rate of progress itself makes it impossible to foresee the state of technology a few years hence. We can only guess what new fields may emerge. And so we must add constantly to the emphasis on fundamentals—on basic theory, and on the methods that may enable a student after graduation not only to keep pace with the advancing frontiers but also to maintain himself on the forefront. Undergraduate education more and more takes on the character of a solid foundation upon which the student can build, as in succeeding years he goes on towards specialization in science or engineering, in architecture, or management, or indeed, in any of the great professions of our day.

Some way, we must learn to deal with the tremendous accumulation of knowledge. As teachers we must now devise better plans for incorporating new facts and principles into old, established theory. Somehow, this huge, indigestible mass of new learning must be reduced for the student to systems of lucid presentation.—*from Remarks in Second Century Fund Telephone Meeting, October, 1961.*

# Environment for Creativity

"As a great educational institution, we shall fall short of our mission if we fail to inspire in our students a concern for things of the spirit as well as of the mind. By precept and example we must convey to them a respect for moral values, a sense of the duties of citizenship, and feeling for taste and style, and the capacity to recognize and enjoy the first-rate."

In these words from his 1959 Inaugural Address, President Stratton established this comprehensive view of the university's mission as a conscious dogma of his administration. Fittingly, these sentences are now mounted on an entrance wall of the recently completed Stratton Center, which was dedicated last October as the Julius Adams Stratton Building.

The President's belief in the rightness and necessity of such an educational mission, and his determination to progress toward a richer student environment at M.I.T. became familiar to me during my recent participation in undergraduate government and residential

affairs. The philosophy was made clear through discussions, explanatory talks, and in his writings; his determination to progress showed clearly in decisions and actions.

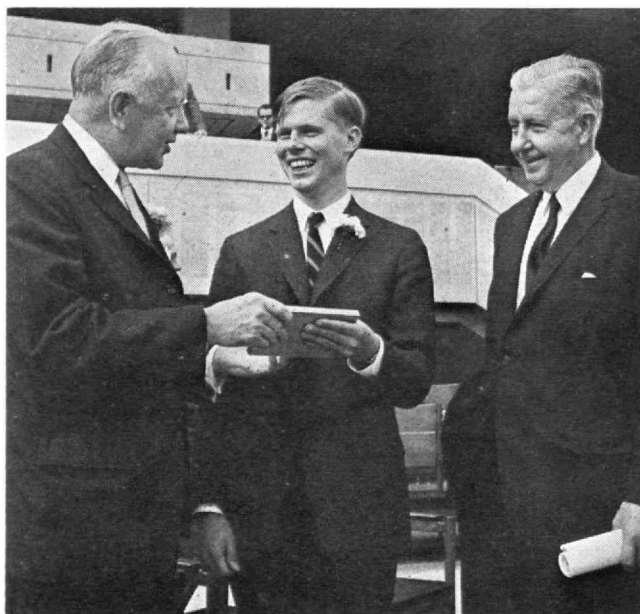
It is perhaps natural that in his interactions with student government Dr. Stratton would talk of the human values imparted by the undergraduate environment, and that I should become most familiar with his ideas and thoughts in this area. The President of the Institute has many publics to hear and many constituencies to serve—but one felt, from discussions and conversations, that this concern for spiritual values in our education was fundamental and pervasive in his thoughts and considerations.

Each of our graduates will be making *nontechnical* decisions throughout his life—decisions which may call upon a professional code of ethics, or involve moral values, or use sophisticated knowledge of human behavior. Each will be expected to create and innovate

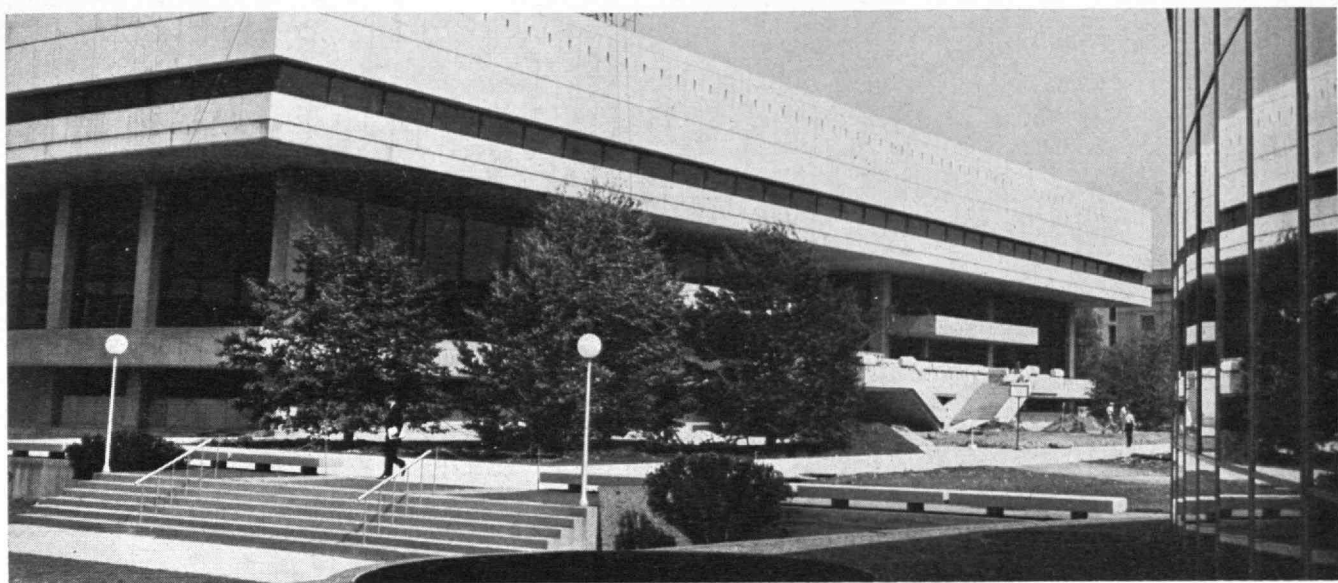
By William H. Byrn, Jr., '66

Right: President Stratton, Mr. Byrn, and Dr. Killian at dedication of M.I.T.'s Student Center, named the Julius Adams Stratton Building (top photo, opposite page).

Opposite, bottom: Dr. Stratton with students at New England swimming finals in 1959.







as well as to calculate. Only an environment such as Dr. Stratton envisions, and has worked for, can provide students with the equipment and experiences which will spark creativity and provide values for such decisions.

Several aspects of the President's concerns and accomplishments appeared to me in our conversations; some of these are familiar to all who have worked with him.

To eager, excited students with ideas on over-all Institute policy, student environment or academic affairs, he may seem extraordinarily receptive—and extraordinarily prudent. But gradually they realize the President's perception of the Institute's national leadership role in educational practices. Gradually they discover his concern for the long-term challenges—growth, new areas of research, reinforcement of the Faculty, teaching innovation—which provide for excellence in areas students have considered “givens” in their education. Students want everything taught and everything studied;

patiently he has communicated the difficulties of skillful allocation of limited resources to educational goals.

Another apparent quality, broadly perceived by students, is his vigorous appreciation of pure scholarship. His personal achievements set the example; he has further displayed this appreciation by endeavors to expose the students to the great theorists and great researchers of our time. In other ways he has sought to assure that students know the satisfactions that accompany the mastery of a substantial theory, and the joys of research and discovery, at an early age.

The presidency of M.I.T. is an enormous occupation, and it is difficult to extract the values and achievements of the man from the less-than-routine responsibilities of the title—especially for a youthful observer such as the writer. But no one can contest my contention that the impress of this man's ideas and values will continue to influence the development of the Institute—and generations of students—for many years to come.





Top: With natives along a jungle river in South America. Bottom: Dr. Stratton and Professor Allis inspect a telescope which was a retirement gift from the M.I.T. Faculty.

# A Reminiscence

*When Dr. Stratton was inaugurated as M.I.T.'s 11th President on June 15, 1959, William P. Allis, a classmate, brought greetings from the Class of 1923. Following is a part of his remarks on that occasion:*

"Peculiarly, you arrived by boat from Seattle, showing due skepticism of the future of travel by rail, but in keeping with the traditions of M.I.T., which came to these shores by barge from Boylston Street.

"As you sailed from the northwest, I sailed from the French Riviera, and we landed in the Great Court, which then as now was troubled by humidity. But this had been corrected by carting in pebbles to cover the clay, for there was no grass or other culture in this Great Court, and little behind these walls. Engineers were then the laboring sons of necessity rather than creative sons of knowledge and imagination.

"In these surroundings you and I matured, and rebelled at what was lacking, but did not run away because we had faith in the future of M.I.T.

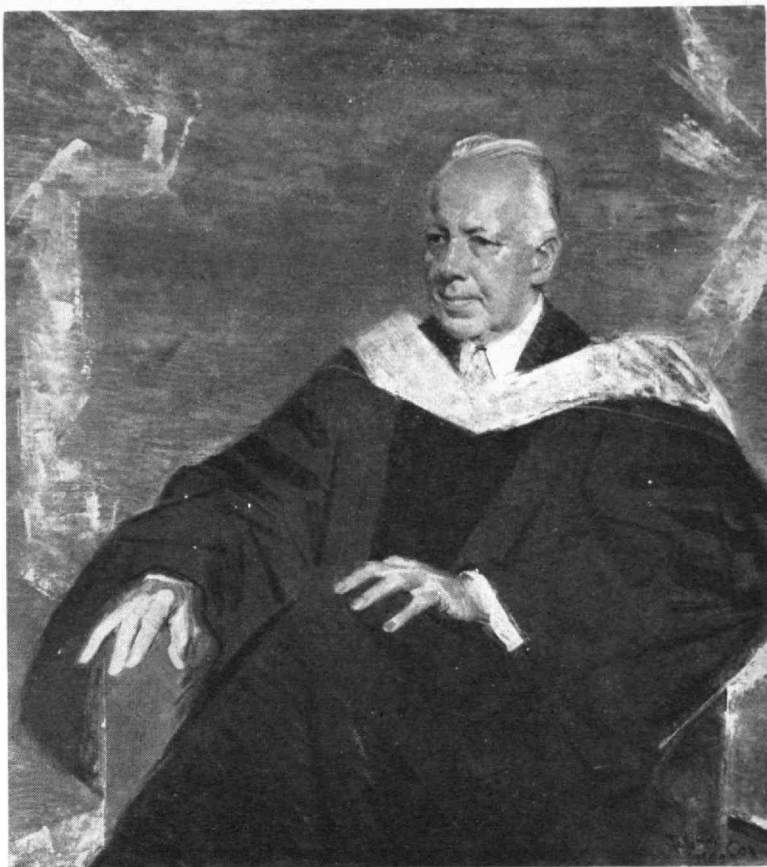
"But we did need refreshment. Zurich was such a refreshing experience for you, as Munich was for me. We both brought something back and we must remember what it was, as times have changed and we can now return the gift.

"For us, 1929 was not the year of a stock crash, but the year of a trip down the Yukon in a rowboat driven, it seemed, by the buzzing of mosquitoes.

"In 1932 we rode ponies in Ecuador, over 16,000 feet above the sea, to the glacier almost on the equator where the city of Quito got its ice. You and I rode dugout canoes down a jungle river where the woods were full of stinging ants, and bees, and gorgeous butterflies. We visited the huts of the head-hunting Indians who wore toucan feather head-dresses, and who offered us the trade of two giggling Indian girls for our single rifle.

"We took two girls on our next adventure, and they found themselves on a rugged but beautiful motor trip from Geneva to Istanbul, through frontiers which would now be closed to us. These two girls are with us today and we greet Catherine as our beautiful and charming first lady."

# Portrait of a President

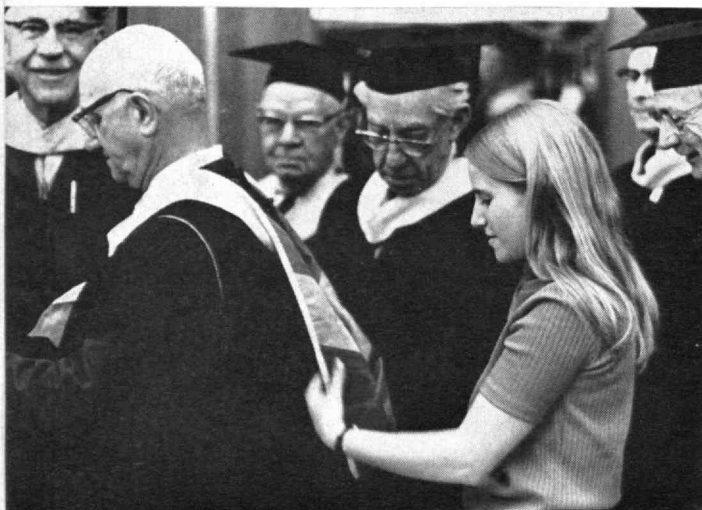


Two prominent Boston artists have recently done likenesses of President Stratton. Above is a portrait by Gardner Cox, '32, shown at left with Dr. Stratton at the March, 1965, Corporation meeting. Below, Dr. Stratton sits for sculptress Beatrice Paipert, '51, whose work was displayed at the M.I.T. Faculty Club this spring. The finished head was given to the Institute by the Undergraduate Association and will be placed in the Student Center—the Julius Adams Stratton Building.





# Commencement and Farewell



B. F. Herzog

Top: Awaiting the academic procession in Rockwell Cage.

Middle: Members of the 50-year Class get help in robing.

Bottom: William H. Byrn, Jr., '66, spoke as Class President.

M.I.T. held its one hundredth graduation exercises on June 10 and, in the words of the Institute's founder,\* it was "a memorable day" for many. For Julius A. Stratton, '23, it was the last commencement in which he would participate as President. He received tributes from both associates and students and the special honor of election as a Life Member of the M.I.T. Corporation.

As is customary at the Institute, Dr. Stratton presented degrees in person to each of 1,243 students, including 660 members of the Class of 1966. This year also marked the 50th anniversary of M.I.T.'s move from Boston to Cambridge. The Class of 1916, the last to graduate from old "Boston Tech," observed the occasion in commemorative ceremonies and other activities during the four-day period from commencement to Alumni Day.

James R. Killian, Jr., '26, Chairman of the M.I.T. Corporation, announced Dr. Stratton's election to that body and took note of his departure "with an inescapable feeling of sadness that the inexorable march of time brings him to retirement." He added that "we note it, too, however, with a sense of rejoicing in all that he has done for this institution and all that he has meant to those of us who have worked with him—Corporation, Faculty, students, Alumni—colleagues all.

"His association with M.I.T. began nearly 46 years ago, when he entered as an undergraduate. From the beginning he brought rare qualities of taste, style, grace, and presence which have left their mark on the Institute," said Dr. Killian.

"As teacher, scholar, and administrator, he has cultivated and helped to fulfill M.I.T.'s highest aspirations," Dr. Killian added. "By his gift of lucid exposition, he has made clear complex problems and policies and conveyed the objects, aims, and spirit of M.I.T. to a wider audience. His catholicity of mind has given him the qualities of a humanist as well as those of a scientist, those of an administrator as well as those of a scholar. His perceptive concern for the individual, especially the individual

\*When M.I.T.'s first class convened in 1865, William Barton Rogers exclaimed in his diary: "May not this prove a memorable day!"

student, has prompted warm appreciation, as shown by the request of the Undergraduate Association that the Student Center bear his name."

On behalf of the student body, William H. Byrn, Jr., President of the Class of 1966, gave Dr. Stratton an engraved bronze plaque "in appreciation of your sincere concern for undergraduate welfare."

More than 2,500 parents and friends of students filled Rockwell Cage where graduation exercises were held and hundreds more watched the ceremonies on closed-circuit television in Kresge Auditorium. Altogether, there were 1,329 degrees awarded, more than 100 students receiving two. The total included 162 doctoral degrees, 81 in advanced engineering, and 386 master's degrees. Degrees were awarded to 33 women, and to 175 foreign students from 54 countries.

Besides degree candidates and Faculty, the academic procession included more than 97 members of the 50-year class led by its marshal, Ralph A. Fletcher. Dr. Killian presided and opened the exercises after the Institute's great mace was put in place by Samuel A. Groves, '34, chief marshal and President of the Alumni Association. Music was provided by a brass choir under the direction of John Corley, Assistant Director of Music at M.I.T. The Reverend Harry J. Dooley, Catholic Chaplain at M.I.T., gave the invocation.

At the commencement luncheon in the Great Court, Dr. Stratton spoke informally to members of the Class of 1966 and their parents, noting that "in a manner of speaking, I am about to graduate, too." Mr. Byrn remarked on recent changes at M.I.T. and on the changing world that he and his classmates will enter: "By our 10th reunion, man will have landed on the moon." Speaking for the Class of 1916, Vannevar Bush, Honorary Chairman of the Corporation, commented that M.I.T.'s progress was the result of the unique spirit that the Institute fosters.

After luncheon, Alumni and members of the Institute community gathered for commemorative ceremonies in honor of two persons who played important roles in M.I.T.'s move from Boston to Cambridge 50 years ago. Wreaths were placed under inscriptions citing Richard Cockburn Maclaurin, President of M.I.T. in 1916, and Welles Bosworth, '89, the architect whose integrated design of the Institute's central buildings contributed much to M.I.T.'s later progress.

## Military Commissioning

Rear Admiral Edward J. Fahy, Commander of the Naval Ship Systems Command, was principal speaker on June 9 at military commissioning exercises at M.I.T.

Eighteen cadets and midshipmen in the Reserve Officers' Training Corps programs received commissions. Six were Navy midshipmen, who became ensigns in the Naval Reserve. Four Army cadets and eight in the Air Force received commissions as second lieutenants in the Air Force and the Army and Air Force Reserves.

Carl F. Floe, '35, M.I.T. Vice-president for Research Administration, presided.

## For Effective Teaching

The Goodwin Medal for "conspicuously effective teaching" was awarded to James R. Geiser, '62, a graduate student in mathematics, at M.I.T. commencement exercises this year. During the ceremonies the Institute also awarded a bachelor of science degree to one of his outstanding students, his wife Lucy.

The Goodwin Medal, which was established in memory of M.I.T.'s first Dean of the Graduate School, Harry Manley Goodwin, '90, by his family, is given each year to a graduate student whose teaching is recognized as effective beyond ordinary excellence. A cash award of \$500 accompanies the medal.

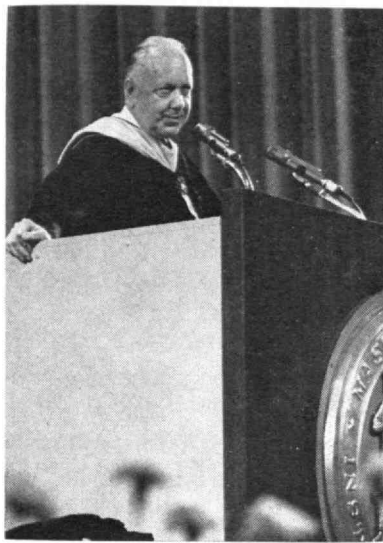
Mr. Geiser, 24, a mathematics instructor, is also a full-time doctoral student and expects to complete his doctoral thesis in mathematical logic this summer. Mrs. Geiser, 21, is also majoring in mathematics. For next fall, Mr. Geiser has won a John Wesley Young research instructorship in mathematics at Dartmouth College. Mrs. Geiser plans to join him at Dartmouth as a doctoral student in mathematics.

Mr. and Mrs. Geiser met at M.I.T. where Mr. Geiser was a graduate teaching assistant, having received his bachelor's degree from M.I.T. in 1962. Mrs. Geiser, then Lucy Jane Garnet, was a freshman. Both Geisers maintained exceptionally high scholastic averages during their undergraduate studies. In 1965, Mrs. Geiser received the Association of M.I.T. Alumnae Award for outstanding academic achievement.

One endorsement for Mr. Geiser's nomination from a committee of undergraduate students reads, "Have spoken to the kids in 18.034 (differential equations)—think he is great—fresh, enthusiastic, on top of the course." A member of the Faculty wrote, "Jim has broad knowledge and a high sense of professional dedication . . . he approaches his teaching with energy and enjoyment."

Mr. Geiser felt that the initial encounter with higher mathematics should be a stimulating experience for new freshmen rather than an arduous task, and he went to great lengths to present it as a useful extension of an individual's equipment for thinking. Regularly he attended all lectures given in connection with the course because he wanted to find out exactly which parts of the lectures his students might not understand and because he wanted to make sure that his discussion sections complemented the lectures. In spite of the demands of his own studies, he scheduled many additional office hours for students who needed help.

"Of particular originality," said one professor, "was a set of methodology notes he gave out to his students to make them more aware of the problem-solving process itself. He then asked them to solve two problems, keeping track of the problem-solving rules they were using. The technique apparently was fairly successful in teaching students that when faced with a tough problem, there are a lot of things they can do besides stare at a blank sheet of paper."



## 'A Pervading Sense of Purpose'

The text of Dr. Stratton's address at the 1966 M.I.T. commencement.

This is indeed the last commencement in which I shall participate as President, and I am awed by the responsibilities of a farewell address. Only one subject seems to me appropriate for such an occasion—and that is M.I.T. itself. Yet I have wondered what I might say to you that I haven't said before in countless reports, in talks to students, at Faculty meetings, to parents, and Alumni.

My own understanding of the Institute stems from the cumulative effect of my own experience—of what I brought here as a student, of my years as a member of the Faculty, of other insights that come to one charged with the responsibilities of administration—spread over an extended base of time sufficiently long for historical perspective. My view of M.I.T. today is partly objective, partly what I know it to be; but I must acknowledge also that it is partly subjective—partly what I believe it ought to be.

There are some respects in which all of us see this Institute of ours in precisely the same way. We have all felt the intensity of life on our campus, the relentless pressures, the pace that we set for one another. But coupled with these demands is a pervading sense of purpose, an involvement in problems linking us to the affairs and needs and conditions of the world today.

From my vantage point I have been privileged also

to see the Institute as a whole. I see it as an extraordinary assembly of students; I see it as a Faculty that enjoys a unity almost without parallel; I see it as a constant interplay of challenge and response; and I see it as a center of leadership in the modern world of science and engineering. Above all, M.I.T. is to me a living entity, a complex of issues and ideas, evolving and maturing with the years. And it is only through these ideas and the discussions that revolve about them that we begin to understand the true essence of this institution.

It happens by chance that we celebrate this June the 50th anniversary of our move from Copley Square to Cambridge. In that famous barge that crossed the Charles the Class of 1916 brought more than the Seal and Charter. There came with them also a plan, a philosophy of education. This has been our heritage, a framework for our aims and objectives. Over the past half century we have built upon it as we have kept pace with the explosive progress of science and engineering and with the revolutionary changes in the character of our whole society.

In the foreword to the General Bulletin there is a statement that undertakes to set forth in a concise fashion our aims and purposes. You may read there that our central mission is to send forth men and women of the highest professional competence; to contribute a share to the enlargement of knowledge and understanding; and to these we should add a sense of responsibility and service to the community and nation of which we are a part. These basic ideas are as valid today as they were in 1861; 50 years ago it was relatively easy to fulfill them. But to interpret them, to give them reality in the context of the modern world brings into being questions and issues of a wholly new order. To convey to you some feeling for M.I.T. as it is today I can do no better than to single out a few of these for comment.

Take first the diverse modes of conducting research. Perhaps the most significant lesson that we learned about science during World War II was the power that lies in a massive, concentrated attack upon a difficult problem. The achievements of the Radiation Laboratory at M.I.T. were a magnificent demonstration of the advantages of teamwork in applied research, and these same methods were carried over after the war into many domains of pure science. The very character of this institution, its central concern for science and engineering, has tended to encourage the grouping of scholars for concerted action. I spoke earlier of the unity of our Faculty. I know of no other campus where members of an academic community have so freely crossed the boundary lines of both the new and the classic disciplines. The interdepartmental centers, which have become such a characteristic part of our academic structure, are themselves the most striking evidence of the effectiveness of this approach.

Indeed, much of our renown has come lately from the successful mobilization of our resources and the focusing of efforts upon an area of study. I think it not only right but inescapable that we will continue to de-



velop in this fashion. This will come about not only because of the experience that we have already amassed. It will be forced upon us because of the increasing complexity of modern science and engineering and the mounting costs of research.

Nonetheless, we must remember that the organizational structure of any institution influences its character. We must never forget that the special role of a university is to offer a haven and an intellectual climate in which the highly creative, highly individual worker can fruitfully pursue his own course in his own way.

The thought that I am expressing here goes far beyond the problems of research or the modern university. There is, in fact, no more demanding challenge in our time than that of learning how to reconcile the conditions of massive effort and scale with the human needs of an individual.

And this leads me directly to the student and to the process of education itself. M.I.T. now has come to terms with the realization that our older aim of completing professional training at the undergraduate level is no longer feasible. Rather, we undertake to provide a foundation for professional life. But what does that really mean? What should be the elements of such a preparation? What should we really strive to accomplish?

First, as always, to assure the mastery of some area of knowledge, if for no other reason than to learn what it means to command a field in depth. But there must be breadth as well as depth, and an adequate base of factual knowledge. In much of contemporary education, and in some of the most modern curricula, there is a danger that substantive matters will dominate to the exclusion of all else. The tremendous accumulation of detailed information—much of it, granted, of a very fundamental character—is such that the task of absorbing it, of knowing what there is to know, may take over the whole process of education. As a result, the student can become largely preoccupied with his effort to digest this mass and to arrange it in some sort of order. I want in no way to deprecate the importance of substantive learning, especially in such a place as M.I.T. But to me education represents much more.

The mark of a truly educated man is an attitude toward learning, an intellectual style. To his treasury of information, he adds a way of going about things, a viewpoint toward life and the world in which we live. He carries with him a spirit of intellectual enterprise such that he continues throughout his whole career to deepen and broaden in knowledge and understanding. The qualities of education of which I am now speaking impart the habit of a critical view of all things that draws upon evidence and reality rather than bias and emotion—the habit of looking beneath the surface of all things, including the things that change, to the basic nature of things themselves.

There is something else that we must constantly strive to accomplish—the most elusive and important of all. It is to create an environment that brings out the innate originality of the student, that develops his imagination,

that encourages him to strike out intellectually upon his own. There is no one subject in the catalogue, no special curriculum, that fulfills these particular Institute Requirements. They derive only from the style of the institution, from its own spiritual and intellectual climate, from all the forces which modulate and temper and fortify both talent and character. This is the kind of environment that we must never cease to cultivate at M.I.T.

And now, finally, let me comment on one further continuing issue of both academic and administrative judgment. By what principles, through what criteria shall we delimit the spheres of our interest and concern? The earliest concept of the Institute was centered on the idea of relevance to the needs of the society. At the outset this was interpreted to mean the needs of a growing industrial nation. In response, the interests of M.I.T. were initially focused upon engineering and architecture. But step by step, with the passing decades, that same theme of relevance has taken us further afield. It led us 30 years ago into first the physical and then the biological sciences. Successively, it has led us into the fields of management, of economics, of political science, of psychology. To me this progression is inescapable. It simply reflects the interlocking and coupling of science and engineering with the whole range of human affairs. We have no alternative other than to continue to hold fast as a guide line to relevance to the expanding domain of science and technology.

And so we are now brought face to face with the question of the role and the place of the humanities at M.I.T. In my own view they have become central to our endeavors rather than merely peripheral. They cannot be set apart—they must put down deep roots of their own for an authentic growth in our special environment. We here are concerned primarily with the rational processes of the mind. We deal in large measure with facts and figures, with elements that are tangible and concrete. These traditional concerns *need* a leavening of the arts and the humanities that we may become truly professional and abundantly aware of our heritage of ideas, of the sweep of history, of the power of art and literature. For these give balance to the range of our knowledge and understanding and a broader import to the works of science and technology that will constitute our own special contribution to the progress of man.

Whether or not all this makes us a university, or whether we are simply imposing upon the word "institute" a new meaning, is really neither here nor there. But, taken together, these issues and the nature of our response impart to our academic institution a life, a personality; a style, a special character of its own.

In this particular review I have been able to touch on just a few of the matters that concern us daily. Through them I have wanted to convey to you some insight, some feeling, for the power and the vitality and the attraction of M.I.T. I want only to add how supremely fortunate I have been to have had a part in its evolution in these critical years.

# Pageantry and Record Gifts



Two heralds led the Class of 1916 procession . . .

Pageantry that recalled M.I.T.'s original crossing of the Charles River accompanied record-breaking reunion gifts at the Alumni Day luncheon in Cambridge on June 13.

Carl M. Mueller, '41, the class' Reunion Gift Chairman, announced the 25-year gift of \$354,600—the second largest such gift in M.I.T. history. This total, given over the past five years, represented contributions from over 490 members of the class.

The Class of 1926 gave \$1,070,000—the largest ever recorded by a class at its 40th reunion. I. Austin Kelly, 3d, '26, Reunion Gift Chairman, reported that the class had raised this amount during the last five years and that it also had received gifts and pledges to endow a professorship named in honor of Dr. and Mrs. James R. Killian, Jr. Dr. Killian himself will choose the first James R. and Elizabeth P. Killian Professor.

But the climax of the day was provided by the Class of 1916 which brought the Rockwell Cage audience to its feet with the arrival of the *Bucentoro*, an 18-foot wheeled version of the Venetian barge that carried the Institute seal and archives to Cambridge from Boston in 1916. The 1966 *Bucentoro* was presented by Ralph A. Fletcher, '16, President of the Class, and commanded by Joseph W. Barker, '16, class Special Gifts Chairman. In presenting a "golden fleece," symbolic of the class gift, Dr. Barker reported that within the past five years the class had raised \$2,533,188—comprising \$677,616 in current gifts and \$1,855,572 in deferred gifts—for the largest reunion gift in M.I.T.'s history. He further reported that, at its 25th reunion, the class had set a goal of \$1,000,000 to be raised by its 50th and had bettered their objective by reaching the grand total of \$3,100,000—including deferred gifts. Over 90 per cent of the class participated in the record total.

Responding "with delight and gratitude," Dr. Killian said the gifts "bespeak eloquently the devotion and generosity of M.I.T. Alumni—and the great and successful



. . . then the *Bucentoro* docked with its treasure.

place they occupy in our society. They also reflect, I like to think, a recognition of M.I.T.'s present importance in the nation and the world and its potential to be an ever-greater force and resource in education."

Speaking to his classmates about their designation of the James R. and Elizabeth P. Killian Professorship, Dr. Killian expressed his appreciation of "the generosity of spirit as well as generosity of giving that has led to the announcement you have just made," and of "the abiding and rewarding friendships I have found in this class and the sense of privilege I have derived from my association with a group so marked by generosity of spirit, warm fellowships, and personal distinction and accomplishment."

In recognizing the Class of 1916 gift, Dr. Killian announced that the central group of M.I.T.'s main buildings are to be named for Richard Cockburn Maclaurin, who was president of the Institute in 1916 and who led the development of the new M.I.T. buildings in Cambridge. In addition, a Maclaurin Chair is to be established in the Department of Aeronautics and Astronautics to commemorate the first teaching at M.I.T. in this field under President Maclaurin's leadership.

## The Watchword is 'Quality'

M.I.T. must achieve "unmistakable primacy" in all its teaching and research, James R. Killian, Jr., '26, told about 1,400 Alumni and friends at the Alumni Day luncheon on June 13.

"Quality must continue to be the watchword, and pioneering, a way of life," said Dr. Killian. "I see M.I.T. continuing to lead a revolution in undergraduate education, experimenting with new organizational arrangements for living and learning and for affording the student new ways to educate himself."

M.I.T. and other distinguished universities will share a leading role in the development of interrelations among colleges, universities, and other institutions, he said. "The communications revolution, the rapid growth of new educational technology, the need for instruments too big for a single institution, and the impending revolution in information transfer are all combining to require new educational coalitions, networks, and interconnections of knowledge and information sources. To help shape the interrelation of these new networks and interconnections in a way that protects the freedom of action and the individuality of the single institution is a problem of enormous new dimensions," and M.I.T. must help solve that problem, said Dr. Killian.

## Alumni Memorial Service

More than 75 Alumni attended the first Alumni Memorial Service in the M.I.T. Chapel on the morning of Alumni Day, in remembrance of the 425 fellow Alumni who died in the year ending June 1, 1966.

David A. Shepard, '26, President of the 40-year class, delivered a eulogy, quoting Samuel Johnson: "The loss of such a friend as has been taken from us increases our need of one another, and ought to unite us more closely."

The service was conducted by The Venerable George O. Ekwall, '18, Northern Archdeacon of Massachusetts, according to the order planned by the late Reverend Edward A. Weissbach, '16, who was originally to have led the service.

## Honorary Members

The M.I.T. Alumni Association inducted President-designate Howard W. Johnson and Mrs. Johnson as honorary members at the annual luncheon on Alumni Day.

Mr. Johnson, formerly Dean of the M.I.T. Alfred P. Sloan School of Management until his election as President-designate, succeeds retiring President Julius A. Stratton, '23, on July 1.

## Gifts to M.I.T. Top \$40 Million

Gifts totaling just over \$40,000,000 have been made to M.I.T. during the last year, James R. Killian, Jr., '26, announced on Alumni Day. Dr. Killian said the total was the largest ever received in one year by M.I.T. It exceeds the total of all gifts received by the Institute during the first 56 years of its existence.

## The Role of Science in Education

Several hundred Alumni and their wives who are expected to attend the 1966 Alumni Seminar in Cambridge next September 10-12, inclusive, will return home with a new understanding of American education and its central contribution to the nation's future strength.

The Seminar plan, according to Professor Walter A. Rosenblith, chairman of the faculty committee, derives from M.I.T.'s deepening concern in education at all levels. Science, he says, is the focus of innovation in modern society, and ever since the first Russian Sputnik science has held a central role in the improvement of American education.

Sessions of the 1966 Seminar will include a series of papers on "The Biological Basis of Learning"; studies of today's institutions and programs in vocational, general, and professional education; case histories of innovation in education; a dialogue on science education and its influence on all educational institutions; and a concluding panel discussion of world-wide educational problems.

Alumni attending the Seminar will be asked to prepare themselves for participating in it by a series of readings, one of which will be in a new book on curriculum improvement to be published by Robert Bentley, Inc., specifically for Seminar use. The contents will provide a summary of current and recent developments through which Educational Services, Inc., and M.I.T. have made important educational contributions.

Further information about the Seminar and registration procedures is available from Frederick G. Lehmann, '51, Secretary of the M.I.T. Alumni Association.

## 'Applause in Our Hearts and Minds'

M.I.T. Alumni joined in tribute to M.I.T. President, Julius A. Stratton, '23, at the 1966 Alumni Day luncheon on June 13. James R. Killian, Jr., '26, speaking at the luncheon, said, "We stand today with applause in our hearts and minds at the close of a distinguished presidential regime."

"Of M.I.T.'s 50 years in Cambridge that we celebrate today, President Stratton has been associated with the Institute for nearly 46, as student, teacher, scholar, and administrator. In one capacity after another he has played a major role in fulfilling for the Institute the promise, the hopes, and the vision of 1916. He has valiantly shared in bringing about a surge ahead of the Institute—in scope, intellectual resources, service, and prestige. We state with gratitude and emotion our lasting debt to him."

Responding to a standing ovation in Rockwell Cage, Dr. Stratton told the Alumni, "I can find no possible way to tell you how deeply moved I am by your tribute. I am filled by a sense of grateful appreciation for the opportunities and friendships which I have enjoyed. No one could have asked for more than to have had a small part in this decade . . ."

"To you, the Alumni, I feel an immense gratitude. M.I.T. is *you*—the men and women who spent a critical period of your lives at this institution, who have never faltered in your support and loyalty to it."





# More Than Books

*"The pace never abates" at M.I.T., say the editors of Technique 1966, the student yearbook. They refer also to "the dynamic fury of the 'Tute'" and "an endless chain of coffee, all-nighters, and books." But although life at M.I.T. may seem to be only a blackboard bearing numbers, "living is more than books" and the photos on these and following pages show some of the extracurricular activities at the Institute. The pictures are presented here through the courtesy of the staff of Technique '66.*



Left: Banners cascading down stairwells are colorful advertisements of student activities.

Owen Franken, '68

Above: George Starkschall, '67, is one of more than 200 students who participate in four musical organizations.

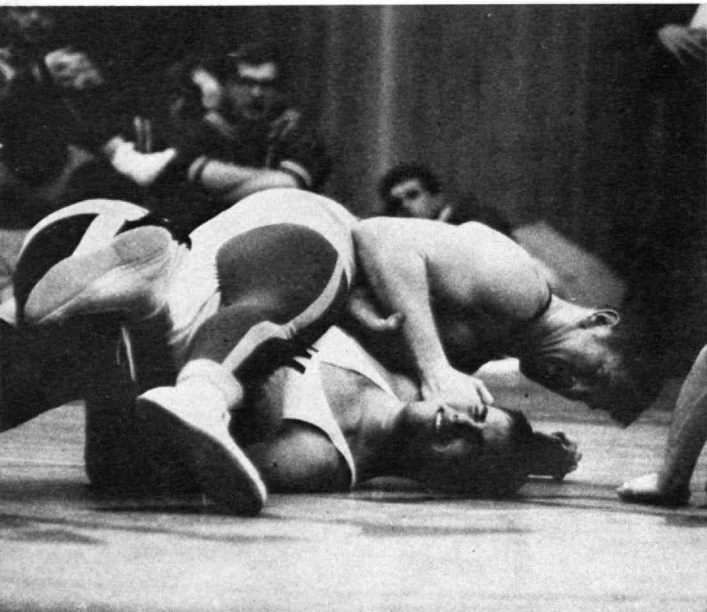
William Bloomquist, '67

Above right: The voices of Phi Delta Theta contributed to the harmony of the All Tech Sing.

Right: Entering freshmen get a glimpse of some of the Institute's technological wonders.

Robin Buxton, '67









Far left, top: Spring Carnival this year had a "Roaring Twenties" theme. Sponsor was Alpha Phi Omega, service fraternity.  
Richard Gray, '66

Far left, center: A confrontation in the Dramashop's presentation of Brecht's *Galileo*.

Far left, bottom: Norman Hawkins, '68, goes for a pin. M.I.T. wrestlers had one of their best seasons in years.

Center: Over the top in Rockwell Cage: "Sometimes the bar falls . . . but we always jump."

Arthur Kalotkin, '68

Above: Bright butterfly kite was in exhibit of kites from Taiwan sponsored by the Chinese Students' Club.

# When The *Bucentoro* Sailed

With its 1966 commencement, M.I.T. observed the 50th anniversary of the Institute's move from Copley Square in Boston to its present site on the Cambridge side of the Charles River Basin.

The formal move took place from June 12 to 14, 1916, during three days of celebration that Boston long remembered. Alumni from throughout the nation returned for a festival of pageantry and fun that must have set some kind of record for academic commemoration.

From upstate New York came a thousand people in an auto caravan and 500 more arrived aboard the *S. S. Bunker Hill* from New York City—a voyage covered by the student newspaper, *The Tech*, using the then-new Marconi wireless so that special issues could be delivered at dockside. All told, more than 4,000 Alumni converged on Boston for the celebration and at one point police estimated that at least as many were in the lobby of the Copley-Plaza at one time.

Ceremonies began at the Rogers Building in Copley Square in the morning on June 12 and in the afternoon the cornerstone for the Walker Memorial Building was ceremoniously put in place in Cambridge. An 81-foot tethered balloon floated above the Great Dome of the new M.I.T.

Later, thousands of Bostonians crowded bridges to watch a water parade that included scores of boats of all kinds and sizes, with a few "aeroplanes" buzzing off

the Esplanade for good measure. Heading the official reviewing party was Franklin D. Roosevelt, then Assistant Secretary of the Navy; as President of the United States 25 years later, he selected a member of the M.I.T. Class of 1916, Vannevar Bush, to direct America's scientific effort during World War II.

While 360 members of the Class of 1916 were receiving their degrees on June 13 at Copley Square, 5,000 Alumni and guests took steamships to Nantasket Beach for picnicking, parading, and spoofing; another 1,000 arrived when commencement ended. The outing was noteworthy for the parade and stunts for which hundreds of Alumni dressed in comical clothes with outlandish props to spoof the pageant that was to follow that night. It was also enlivened by Godfrey Lowell Cabot, '81. An avid pilot, Mr. Cabot surprised the crowd by swooping down in a huge hydroplane, then climbing to altitude to cut his class numerals in the sky.

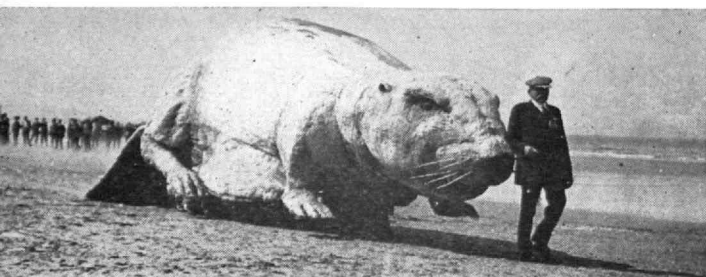
The "Pageant and Masque of Power" that night left Boston agog. It was conceived by the late Professor Ralph Adams Cram, who possessed an unusual sense of drama and a wide knowledge of medieval European pageantry. His purpose was to present in allegorical form the evolution of intellectual power and its eventual domination over chaos, superstition, and ignorance.

Ten thousand people pressed into the Great Court to watch. Undergraduates wearing the armor of Venetian guards escorted crimson-clad M.I.T. officials as they brought the school seal and charter in ornate chests across the Charles River in the *Bucentoro*, a specially constructed replica of the state barge of the Venetian Republic. Henry A. Morss, '93, decked out as Christopher Columbus, was captain.

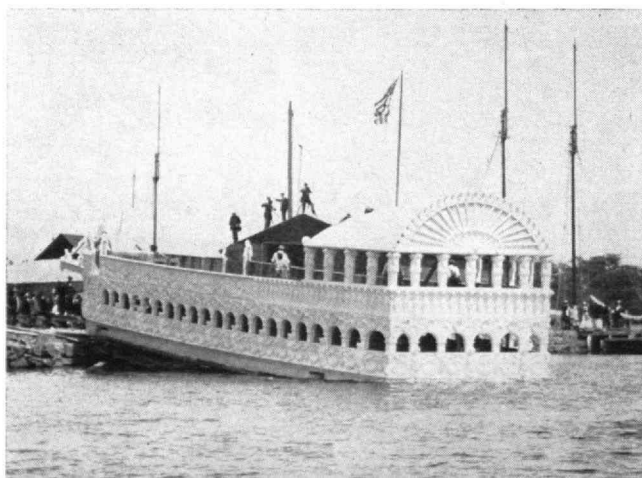
When they reached the Cambridge shore, bombs and rockets went off and searchlights lit the sky. Awaiting them at the head of the Great Court were Governor Samuel W. McCall (who arrived on horseback escorted by two troops of "Lancers" in scarlet uniforms), Boston Mayor James Michael Curley, and Cambridge Mayor Wendell D. Rockwood, all seated on canopied thrones. In the center, primitive men, medieval students, nymphs, and fire dancers—with Miss Virginia Tanner as the *première danseuse*—performed to the music of a 500-voice choir and a 100-piece orchestra. Professor Cram, costumed as Merlin the Magician, presided.

The *Boston Globe* put out an extra to report the events. One Faculty member who wrote about it later called it a "phantasmagoria—a succession of rapidly shifting glimpses of a vast spectacle employing all the artifices of color, illumination, costume, music, and

(Concluded on page 70)



In 1916: Beaver on the beach and launching the *Bucentoro*.





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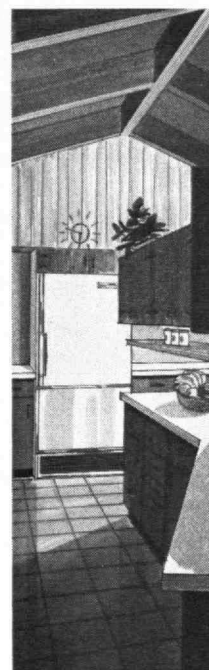
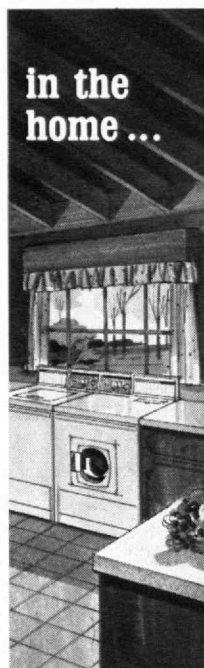
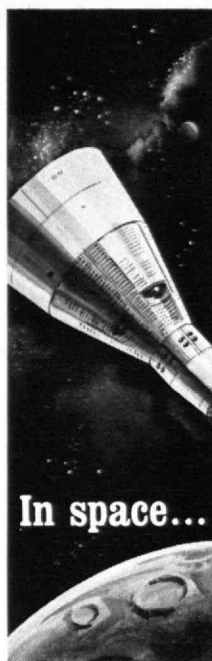
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## Appointed Vice-president

Jack P. Ruina, Professor of Electrical Engineering at M.I.T., has been appointed vice-president for special laboratories. He has been on leave since September, 1964, while serving as president of the Institute for Defense Analyses in Washington, D.C.

Dr. Ruina will be the Institute's senior officer on matters relating to the two national service laboratories that the Institute administers for the federal government—Lincoln Laboratory and Instrumentation Laboratory.

Lincoln Laboratory in Lexington, Mass., conducts fundamental research in communication sciences, computer sciences, and in general and applied physics, astrophysics and geophysics. Instrumentation Laboratory in Cambridge, Mass., specializes in inertial guidance, navigation and control systems and, among several assignments, is designing the guidance system for the Navy Poseidon missiles and the guidance-navigation system for the National Aeronautics and Space Administration's Project Apollo mooncraft.

The Institute for Defense Analyses in Washington, was established in 1956 by a consortium of universities, including M.I.T., as a nonprofit organization to provide professional research and analysis services to the Department of Defense.

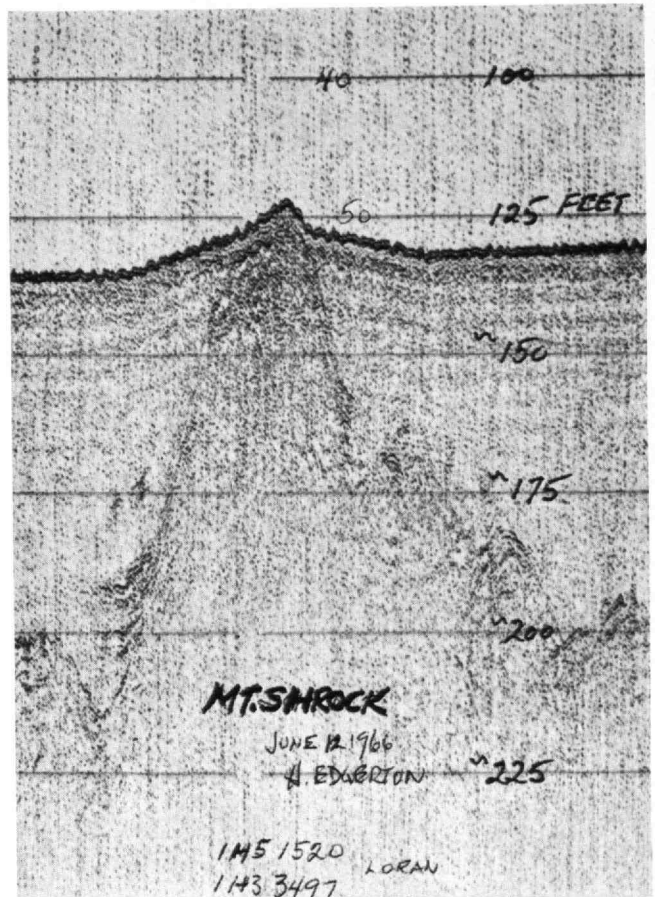
Dr. Ruina recently served as chairman of an advisory committee to the Secretary of Health, Education, and Welfare on policy matters relating to contract research. He serves on a number of panels of the President's Science Advisory Committee. He is a technical consultant to the Office of the Secretary of Defense and to the Arms Control and Disarmament Agency, and is a member of the Air Force Scientific Advisory Board.

Dr. Ruina was a professor of electrical engineering at the University of Illinois when he began federal service in 1959. He was deputy for research to the Assistant Secretary of the Air Force for Research and Development in 1959, assistant director of defense research and engineering in the Department of Defense from 1960 to 1961, and director of the Advanced Research Projects Agency from 1961 to 1963, when he came to M.I.T.

A native of Poland, and a naturalized U.S. citizen, Dr. Ruina was graduated from City College of New York in 1944 and received master and doctor degrees in electrical engineering in 1949 and 1951 from the Polytechnic Institute of Brooklyn. He was a member of the faculty at Brown University from 1950 to 1954.

## Calling All Engineers

The demand for engineers is greater than ever, according to a survey conducted by the Engineering Manpower Commission of Engineers Joint Council. Of 207 employers responding, the majority reported that recruiting was more difficult this year than last, both for new graduates with bachelor's and advanced degrees, and for experienced graduate engineers.



None will ever see it and none will climb it, because newly discovered Mt. Shrock lies below the ocean floor about three miles east of Nahant. It was found last June 12 when Professor Harold E. Edgerton, '27, and Donald Krotser, a graduate student, were doing experimental work aboard the M.I.T. research ship, the *R. R. Shrock*. Using a new, small, high-precision electromagnetic boomer, they made this sonar record of the sub-bottom peak and named it after Professor of Geology Robert R. Shrock, for whom the ship is named.

## Waste-Management Proposal

The construction of a full-scale experimental waste-management system in a "new city" has been proposed by a Committee of the National Academy of Sciences-National Research Council as a "first strategy" of an attack on environmental pollution.

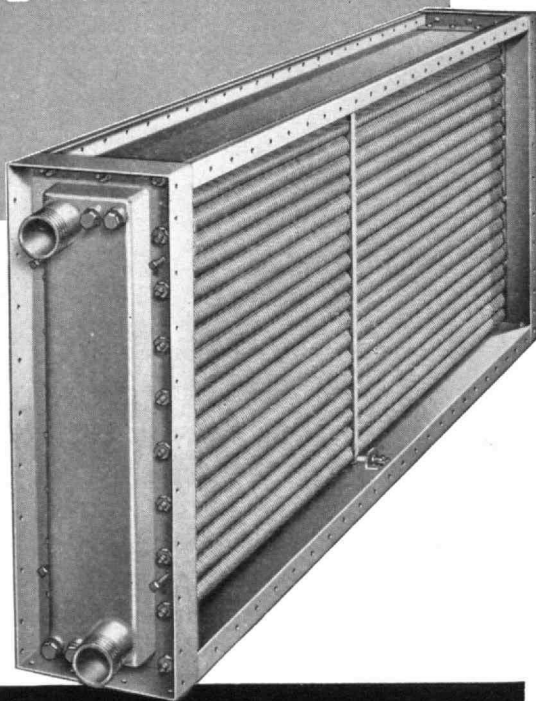
In a report issued this spring, the Committee on Pollution said that the "massiveness and urgency" of the problem justifies such a large-scale experiment.

Chairman of the committee is Athelstan F. Spilhaus, '33, Dean of the Institute of Technology at the University of Minnesota. Committee members include: Dayton E. Carritt, Professor of Chemical Oceanography at M.I.T.; Howard O. McMahon, '41; Timothy E. Shea, '19; and Benjamin H. Stevens, '54.

The committee believes that pollution is a problem of waste management rather than disposal, and that society must take steps to recycle its residues.

(Continued on page 54)

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**T** HE TREND OF AFFAIRS

(Continued from page 53)

## Lasers and Sound Waves

Physicists at M.I.T. are using laser beams to generate sound waves at frequencies a million times higher than those a man can hear. So intense are these high-frequency waves they can shatter quartz and sapphire, according to Raymond Y. Chiao, '65, Assistant Professor of Physics at M.I.T. Dr. Chiao collaborated with Charles H. Townes of M.I.T., co-inventor of the laser, and Bor's P. Stoicheff of the Canadian Research Council, in developing a special optical system to verify the existence of these waves.

"Dr. Townes predicted several years ago that an intense light beam could be used to generate high-frequency sound waves," Dr. Chiao told members of the Acoustical Society of America at a meeting last month, "but detecting and measuring these hypersonic waves posed quite a problem." The optical system devised by the M.I.T. experimenters enabled them to compare the frequency of the laser output beam with that of light reflected directly from the crystal targets. The fact that some of the scattered light had been shifted to a lower frequency showed that it was reflected from receding acoustic wave fronts, and the extent of the shift in turn indicated the acoustical frequencies. The latter were 30 billion cycles per second in quartz and twice that in sapphire.

"The acoustic waves are caused by vibrations of the crystalline material," explained Dr. Chiao. "Any electrical pulse, in this case a pulse of light energy, will cause a piezoelectric material like quartz to contract. A series of pulses will cause it to vibrate.

"Amplification occurs," he said, "when the sound waves caused by these vibrations reflect some of the laser light. The reflected light then combines with the incoming light to produce harmonic frequencies, which are multiples of the two frequencies being combined. These drive higher frequency sound waves which scatter more light, producing still higher harmonics and higher sound-wave frequencies. In a relatively short time, the sound waves are amplified to such a point that they crack the vibrating material.

"We can now produce and amplify acoustic waves at frequencies that were previously inaccessible," Dr. Chiao said. "These waves can be used for a variety of experimental purposes. Under certain conditions it should be possible to generate coherent sound waves at frequencies much higher than any . . . produced so far."

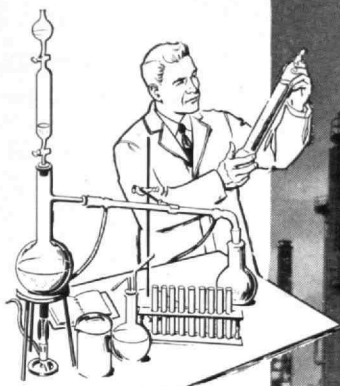
## Employees Go to School

Since the M.I.T. Tuition Assistance Plan was started in 1960, more than 1200 employees have taken advantage of the program, reports John A. Carley, Office of Personnel Relations. The Plan allows employees tuition assistance and incidental fees for courses, most often leading to advanced degrees, at nearby colleges.

This year 458 employees studied under the Plan, which has increased its tuition allowance from 50 per cent to 75 per cent.

(Concluded on page 56)





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**T**HE TREND OF AFFAIRS  
(Concluded from page 54)

## Designing a Space Robot

Researchers at M.I.T. have begun analysis and design for a perceptive robot that could help explore planets like Mars and radio important data back to earth. So far, according to Louis L. Sutro, '52, of the M.I.T. Instrumentation Laboratory, the design efforts have concentrated on a rudimentary visual perception system, a stereoscopic system that would make the perception three-dimensional, and a computer-based decision and control system. No equipment has been built or tested, said Mr. Sutro, but analysis seems to indicate the attempt would be worthwhile.

"It is clear that technology supplies us increasingly reliable parts ever smaller and able to work on little power so that computers become more and more compact," he said in a report presented at a meeting of the American Astronautical Society in May.

"At the same time," he added, "the art of using these devices expands greatly so that they have ceased to be the novelties for study and have become, instead, common tools. A number of workers concerned with this art . . . are attempting to make a true robot, capable of self-programming within certain limits, one that is capable of handling a large sequence of choices, correcting itself when it makes an error in judgment."

Specialists in neurology and biophysics are collaborating with experts in electronics, optics, and computers in the M.I.T. effort. One of Mr. Sutro's principal collaborators is neurophysiologist Dr. Warren S. McCulloch, and the design for a visual perception system is based on earlier work by Dr. McCulloch and Professor Jerome Y. Lettvin, '47, on signal processing in the optical nerve of the frog.

## Elected to Corporation

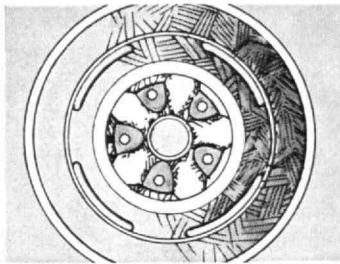
James R. Killian, Jr., '26, has announced the election of Uncas A. Whitaker, '23, of Harrisburg, Pa., as a Life Member of the M.I.T. Corporation, and Dr. George W. Thorn, of Cambridge, Mass., and Robert B. Woodward, '36, of Belmont, Mass., as Term Members.

Mr. Whitaker, who is chairman of the board and chief executive officer of AMP Incorporated (formerly Aircraft-Marine Products, Inc.), became a special term member of the Corporation in 1961. Last fall, a new laboratory building in the M.I.T. Center for Life Sciences was named the Uncas A. and Helen F. Whitaker Building in honor of Mr. and Mrs. Whitaker.

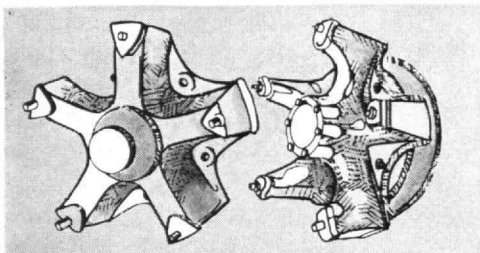
Dr. Thorn, who became a special term member of the Corporation in 1965, is Hersey Professor at the Harvard Medical School and physician-in-chief of Peter Bent Brigham Hospital.

Dr. Woodward received the S.B. and Ph.D. degrees from M.I.T. in 1936 and 1937, respectively, and is Donner Professor of Science at Harvard University. He has accomplished the synthesis of a number of important chemical compounds, including quinine, cortisone, chlorophyll, strychnine, and aureomycin, and received the Nobel Prize in Chemistry in 1965 and the National Medal of Science in 1964.

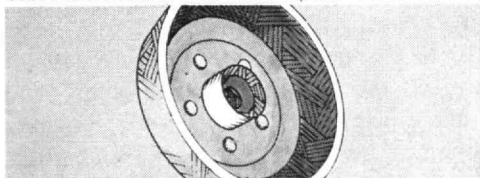
this  
is what a  
"wheel builder"  
builds.



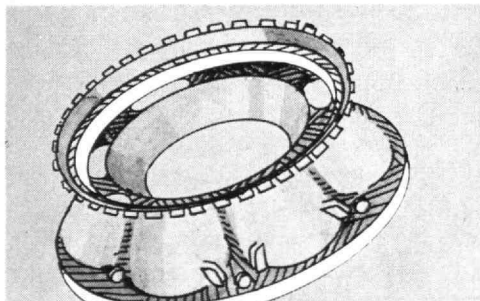
this is what Kelsey-Hayes builds.



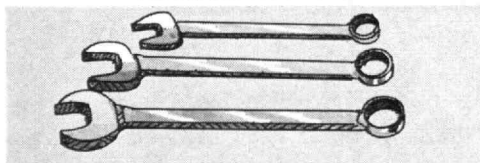
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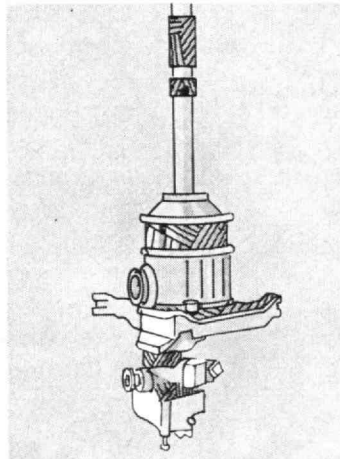
Hubs and Drums



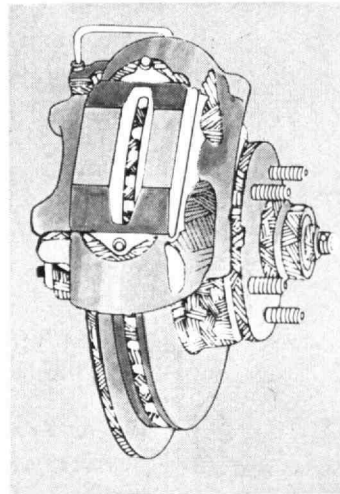
Aerospace Weldments



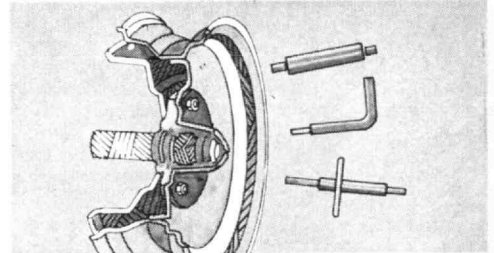
Hand Tools



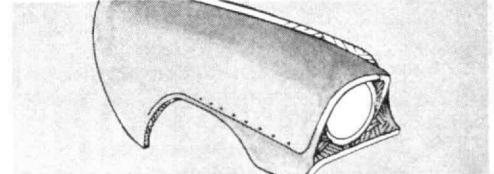
Helicopter Transmissions



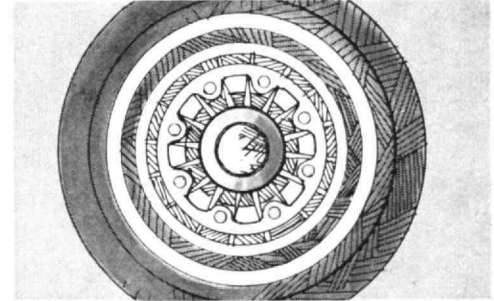
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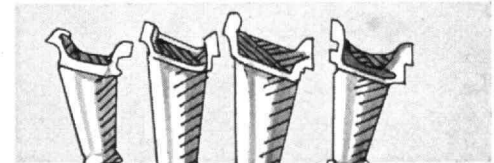
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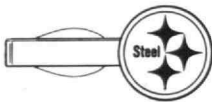




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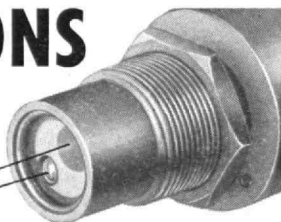
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NOTABLE NEW BOOKS

**THE TROUBLED CAMPUS**, compiled by the Editors of the *Atlantic*. (Atlantic, Little, Brown, \$1.95).

Reviewed by Paul E. Gray, '54, Associate Dean of Student Affairs at M.I.T.

The role of higher education in our national life has changed significantly during the two decades since World War II. Illustrations of the dimensions of this change are manifold. The headlong expansion of college facilities to meet the influx of students, and the intense competition and selectivity of the admissions process are, in part, manifestations of the popular expectation that a college education is necessary and appropriate for all. Universities and university people participate widely in the development of our economy and society, as evidenced by the growth of the research establishment, by the emergence of the federal-grant universities, and by the increasing participation of professors in the councils of government.

Of course, these changes are not occurring without a full measure of the uncertainties, tensions, and searchings for new frames of reference that accompany the rapid evolution of any social system. Various forms of student protest, indications of unrest and disenchantment, concerns about the depersonalization of the educational process, and sharp disagreements over the role and function of the college teacher are in the news as recurring themes.

This book represents one effort "to explore . . . what was *really* happening to the students, faculty, and administrators on the troubled campuses." As an attempt to examine the motivations and pressures which operate in institutions of higher education, the book provides some thoughtful and penetrating insights in areas where conflicts in objectives are rife, and where desirable alternatives are rare and seemingly undefinable.

*The Troubled Campus*, which is an expansion of a supplement to the November, 1965, *Atlantic*, is a collection of 16 essays. The contributions are grouped in three sections entitled: *What's Bugging the Students*, *Professors Under Pressure*, and *The Meaning of a University*. Three of the essays are particularly responsive to the questions posed by the editors of the *Atlantic*; they also provide representative illustrations of the content of the book.

Irving Kristol's analysis of student unrest or "misbehavior" is sharp and incisive. He sees campus unrest as "one of the last, convulsive twitches of a slowly expiring American individualism," and as a

reaction to the carefully planned and functionally organized programs of higher education in the welfare state, which "leaves so little room for personal idealism . . . and mutes the challenge to self-definition."

The objectives and pitfalls of good teaching, and the difficulties intrinsic to the assessment of the quality of teaching, are put in sharp focus by Arthur Mizener in his essay, "The Path to Promotion." Certainly discussions of the pressures on professors and of the nature of college teaching would generate more light and less heat if two points which Mizener makes were more widely understood. First, there is far more to good teaching than what happens in the lecture hall or classroom. Second, considerations relating to promotion and tenure require the evaluation of a professor's performance in several dimensions, and it is not possible either to make fine distinctions in several of these areas, or to get wide agreement on the criteria to be used. Mizener recognizes the defects of the present systems for evaluating the teacher, but believes that recognition of student opinion in this area would be a serious mistake.

In an essay entitled, "The Race for College," Robert P. Wolff comments lucidly on the consequences of intense competition in college admissions and discusses the hazards inherent in the substitution of achievement for intellectual fulfillment. He questions the advisability of using our schools "as an instrument by which we sort, prepare, and grade our young people in order then to distribute them among the different and extremely unequal positions in our society . . ."

This book asks many of the questions which are of interest to everyone concerned with higher education, whether he be parent, professor, or college administrator. The opinions, conjectures, and answers advocated by the contributors are lively and provocative: the book makes a significant contribution to the continuing discussion.

## New from the Publishers

*Communism in Europe*, Continuity, Change, and the Sino-Soviet Dispute, Vol. 2, edited by William E. Griffith, M.I.T. Lecturer in Political Science (The M.I.T. Press, \$12.50). The interaction of developments in European communism and the Sino-Soviet dispute is explored.

*Explorer of the Universe*, A biography of George Elery Hale [1869-1942], by Helen Wright (E. P. Dutton and Co., Inc., \$10). An authoritative biography of the famous American astronomer.

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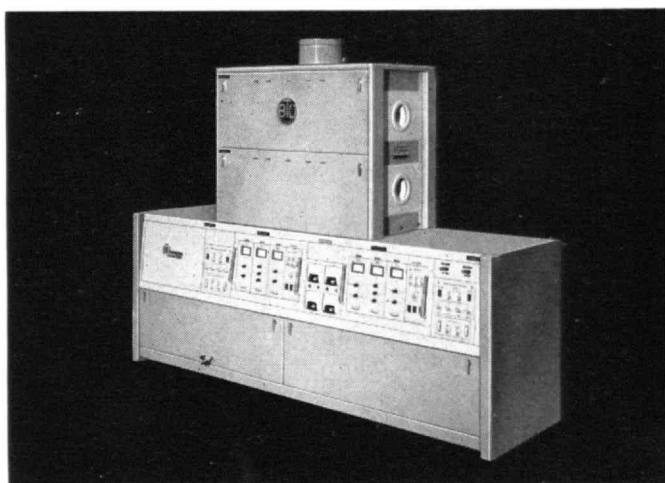
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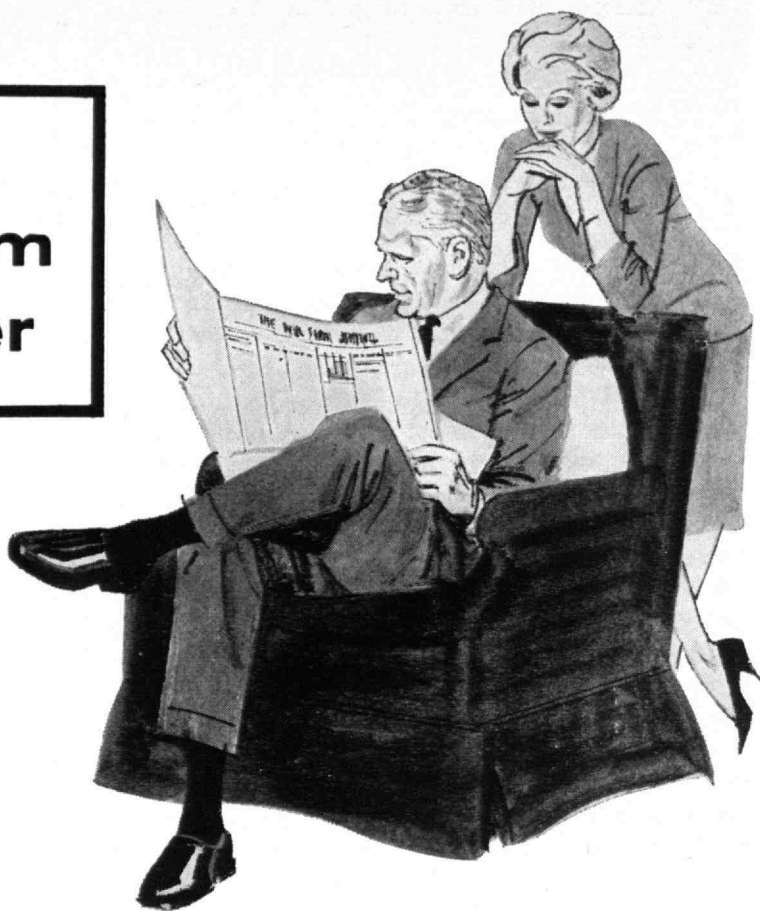
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## 'There Followed 38 Years . . .'

(Continued from page 24)

course in chemistry and a special course in mathematics in both of which he had received top grades. He thought he knew enough electricity to fulfill the entrance requirements so he just went ahead and registered as his own judgment dictated. However, he was soon to learn that he had underestimated the ways of the Registrar's Office, for there were many complications in the business of dovetailing subjects, particularly those surrounding the required physics subjects and the "six hundred" classes (the series in electrical engineering). His three-year plan came dreadfully close to ruin.

At this point he had his first confrontation with Dr. Vannevar Bush [16]. In Dr. Bush he encountered a man of inspiration and breadth who promptly saw the point of this student's difficulty. Here, too, was a first sign of light in an otherwise dreary encounter with the then cold climate of M.I.T.

Bush dealt with ideas, was an imaginative doer, and was acutely skilled in perceiving the implications of the work of others. His stimulation of young men with ideas and his own pursuit of the further development of these ideas was phenomenal.

Bush was quick to cut out the dross and come to the substance of the problem. Thinking the seeming impasse the result of silly, arbitrary, and capricious rules, he authorized the frustrated student of electrical engineering to make up sophomore physics by taking some other course of acceptable value. This sympathetic encounter marks the beginning of a mutual respect and admiration that has prevailed to this day.

In this stage of high confusion, being more fascinated by names than anything else, Stratton unwittingly chose a graduate subject tantalizingly described as *Fourier Series Fourier Integrals and Integral Equations* taught by no less a light than one Norbert Wiener—and for the first time.

I happened to take this subject myself at the time, along with L. F. Woodruff [18], Karl Wildes [22], Manuel Vallarta [21], I believe, and others. I can agree with Stratton's recent observation as to his dilemma at the time: he has remarked with glee, "They didn't know what he was talking about either."

In this class we were deluged for the first time with the Gibbs phenomena, Lebesgue integrals, Schwarz's Inequalities, complex-variables, existence proofs, and other tantalizing, interesting, weird, mysterious lore. In the mathematical gymnastics we learned to respect and to look for  $\pi$ 's and zeros, as if all proofs led to one or the other. Suffice to say that it was my first taste of the rigors and the romance of mathematics. Here we were exposed to an inspiring mind, one of the few to be encountered in our early peregrinations as "electrical students" at the Institute. This course was anything but conventional. It dealt with new ideas and in a novel way. The undergraduate 600 series of subjects, on the other

hand, impressed Stratton, as they did me, as deadly stereotypes.

Among staff members who stood out in Stratton's early impressions, Bush of course towered above them all. He remembers with warmth Tubby Rogers, ex-reporter then in the Department of English. Rogers intrigued him. He was an exciting teacher with a novel point of view who, Stratton says, stimulated him to do a lot of constructive reading and otherwise stirred his mind.

I came to know Julius Stratton first in my class in which I taught one of those redoubtable 600 subjects. From observation of his ability and performance as a student and from casual general conversation with him, it was natural that I should take an interest in this promising, impressive student.

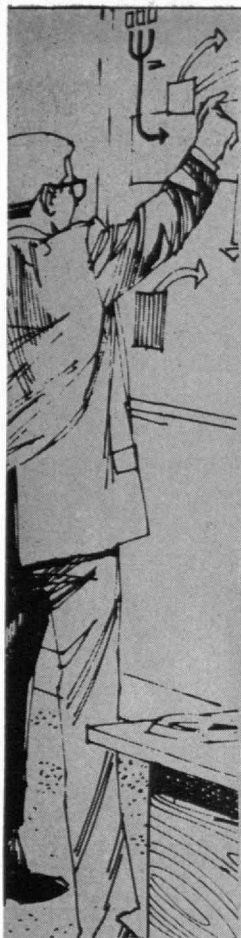
For some time, I had had an idea for research having to do with the control of the periodicity of a relaxation oscillator or multivibrator (Abraham and Bloch) by locking it in synchronism with a tuning fork. Could this be done? If so, it would make possible the generation of a stabilized series of harmonics, the frequencies of which would be multiples of the frequency of the fork which in turn could be calibrated as a standard. I proposed this as a subject to Stratton. He reacted enthusiastically to the idea. With a classmate, Jim Clapp, whom he had met over the air while they were commercial radio operators, the thesis was completed, published, and was a conspicuous success. We were astounded to find that it was possible to detect and make use of harmonic frequencies as high as 30 megacycles, all based on a 1,000-cycle fork.

I can modestly say from his story of the event, that this collaborative research of student and teacher had a significant effect in awakening Stratton to the fact that he was a contributing member of the Institute family. The result was a continuing exchange of ideas and further collaboration that, I am satisfied, ultimately led him to return to the Institute—initially to be associated with the communications group in the Department of Electrical Engineering and penultimately with the Department of Physics.

For better understanding of Stratton's reactions to M.I.T. in this interval of its history, and for appreciating the value of this background in his subsequent years of administration, a few more salient observations are necessary. Maclaurin had died early in 1920. He had dedicated himself to the problem and means of achieving a reconstructed M.I.T. He had raised the first large gift (from George Eastman) which made possible the move to Cambridge and the establishment of a geographical focus. Under his prudent statesmanship, the imminence of a "merger" with Harvard was handled without damage. But his untimely death in 1920 came before he could undertake the needed rebuilding of the teaching staff.

It was not only the shock of his death that the Institute suffered and had to survive, but, as matters turned out, the Institute was to go through an interregnum, a

(Continued on page 62)



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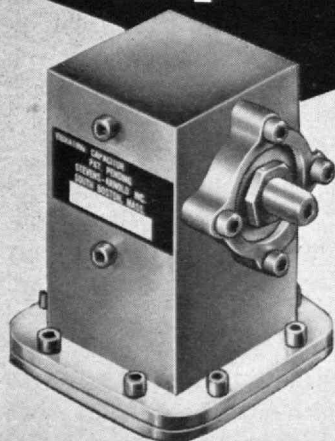
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## 'There Followed 38 Years . . .'

(Continued from page 61)

period of drought from lack of leadership and from organizational confusion that was bound to reach down into student consciousness, particularly that of perceptive, sensitive persons such as Julius Stratton.

Stratton came to know Francis Hart [89], of the Institute Corporation Executive Committee, almost from the start of his enrollment at the Institute. In fact he became virtually a member of the family. As happens in many instances his relationship grew deeper and to such a degree that Mr. Hart often confided in the young man his quandaries about Institute problems. Young Julius acquired further understanding of administrative matters through conversations with Samuel Wesley Stratton (no kin), who became president after the interregnum. The student witnessed the difficulties of the president who, though bitterly criticized, made a greater contribution than his detractors would like to admit. The result was that the future president was at an early age privy to many of the vexing contemporary problems in the management of M.I.T. Thus he had advantages of perspective seldom if ever available so early in life, particularly to one predestined to assume the same robes of office a generation later.

It was during this period that I was especially concerned that the field of high frequencies had been dreadfully neglected at M.I.T. Through Pierce and Chaffee, Harvard had come into prominence in the fields of high frequency and electronics. With this incentive, I set to work, in 1920-1921, my first year at M.I.T., to build this area of interest, to generate the underlying ideas, and to organize an option in electrical communications as a device to introduce the necessary preparatory mathematics for a solid course in electromagnetic theory. We introduced Maxwell's equations so as to arm the students in the treatment of lines electrically long, antenna theory, the more sophisticated linear network theory common to the rapidly emerging communication techniques, and other theory pertinent to the field now known generically as electronics.

It was in this atmosphere in the early days that Julius Stratton found not only keen interest but a place in the M.I.T. educational matrix. No one could have been more gratified than I when he responded affirmatively to my suggestion that he return to M.I.T. from Zurich after his doctoral work and join the communications staff as an assistant professor—in effect the consulting physicist in these expanding activities.

Out of the embryonic work in the communications option developed other notable colleagues who have brought distinction to M.I.T.—colleagues such as Ernst A. Guillemin [24], Wilmer L. Barrow [29], Henry G. Houghton [27], William H. Radford [32], and Lan J. Chu [35]. Chu collaborated with Stratton on several seminal papers in the field of antenna radiation and its associated mathematics. In the work of this team, Stratton proved to be a great leavening influence.

(Continued on page 65)

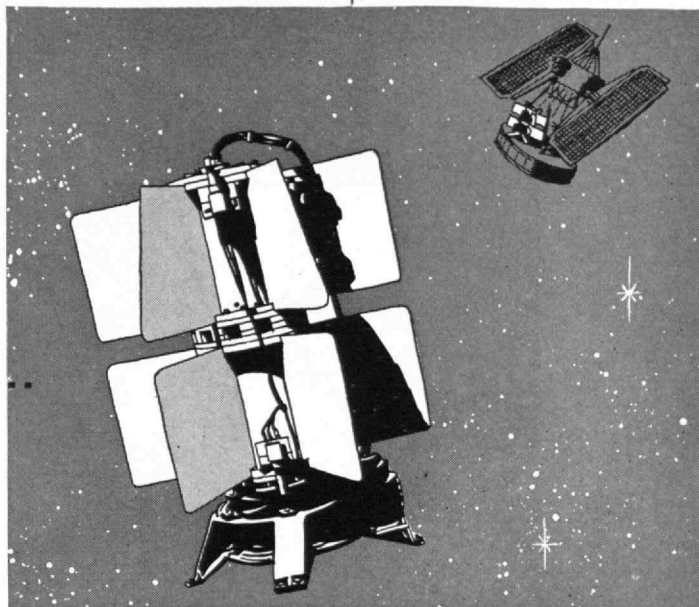
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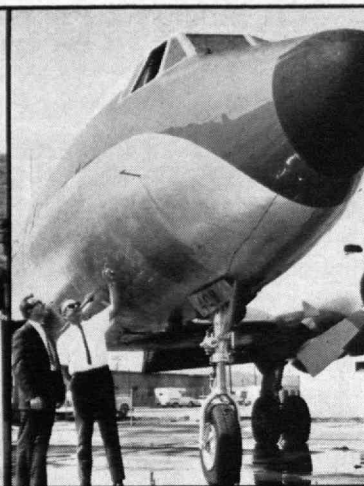
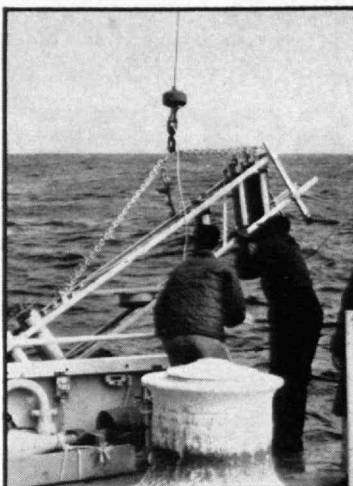
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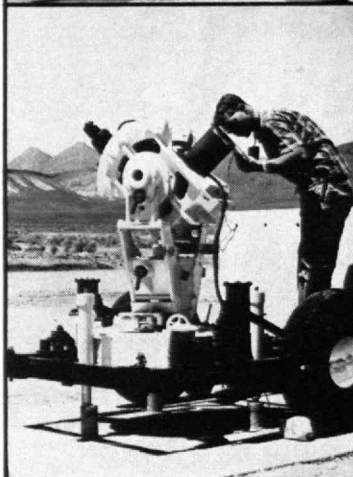


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## 'There Followed 38 Years . . .'

(Continued from page 62)

Stratton's research contributions were many in that early period, including a paper on the effect of rain and fog on the propagation of very short radio waves, published in June, 1930. This paper became of classic importance in the application of microwaves during World War II. Another unusual contribution of this period was in the theoretical investigation (1930) of the transmission of visible light through fog; Houghton was the co-author. It was the high quality of Houghton's work on fog and its physical properties that led to his selection as Head of the Department of Meteorology.

It remains to add one more significant and little-known segment of the Stratton history. After receiving his bachelor's degree at M.I.T. he decided to go to France to master the French language and prose, and also to do a bit of serious soul-searching. He was not yet sure how he was to resolve his conflicting interests in engineering and science.

His father was interested in his son's quandary and, at quite a sacrifice, made it possible for him to spend a year in France. His first idea was to go to Paris. On the steamer he met kindred spirits whose advice was to go to Grenoble. By rationalization, he thought that there he could learn something about water-power engineering. He took a summer course in this subject, but it involved mostly visiting hydroelectric installations and he viewed it as a pleasant picnic. However, he went deeper and deeper into French literature, history, and philosophy, and spent the winter "frankly just reading, but reading like mad."

Deciding that he was speaking too much English because of too many Americans about, he moved to Toulouse, and it was there that he encountered a wonderful teacher whose stimulation led him to conclude that he had just discovered philosophy. He became so engrossed in the subject that he wrote to Harvard for application blanks with the idea of doing a doctoral thesis in this field. He believed he had a wonderful subject: "The Influence of Science on French Literature." At this juncture he recalled a little book that Tubby Rogers had recommended to him at M.I.T., a book he respectfully keeps on a prominent shelf in his library today. This tract was entitled *The Voice of Science in 19th Century English Literature*, and dealt with the impact of Darwin and the new science on contemporary literature.

But then, still groping, he came across the biography of Pasteur written by Pasteur's son-in-law, Valery Radot. In this story of a great scientist Stratton saw now what research was all about, and he now understood that he could build on the background that he had. He would work for a doctorate in physics and then work in the M.I.T. Department of Electrical Engineering.

During this period, Stratton and I were in correspondence. He was invited to return to the Department as a research assistant in communications. He accepted and

(Concluded on page 66)

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## **'There Followed 38 Years . . .'**

(Concluded from page 65)

returned in the summer of 1924, obtaining his master's degree during the period between 1924 and 1926. It was in this period, too, that the Bell Telephone Laboratories were co-operating by giving courses in the Electrical Engineering Department on such subjects as Probability and its Engineering Uses by T. C. Fry and a rigorous course on the Theory of Vibrating Systems and Sound by Irving B. Crandall. Here was a vicarious means of invigorating our program and making up for the Institute's past waywardness. Stratton not only took the Crandall courses but even gave some of the lectures when Crandall was unable to be on hand.

The course in electromagnetic theory for the communications students was being given in the Department of Physics by Manuel Vallarta. Hans Mueller had come to the Institute, an inspiring teacher who had studied under Debye. There was also Heymans giving a course in theoretical physics. Stratton took work under each of them. Here were minds of a kind— young, highly trained, creatively brilliant—to illuminate the erstwhile gloomy area of physics and (by reflection) electrical engineering.

In part, the influence of Hans Mueller led Stratton to do his doctoral work in Zurich under Debye, who was selected for his interest in electromagnetic theory. For the purpose of this concluding study, Stratton left M.I.T. in 1926. He returned in 1928 as assistant professor in the Department of Electrical Engineering.

In a letter to Professor Dugald C. Jackson, who was then head of the Department, Dr. Stratton wrote in June, 1928: "I should like only to add that I have long been convinced that I could find nowhere more congenial or inspiring working conditions than in the Electrical Engineering Department, and I am looking forward to my return to the Institute with the greatest satisfaction."

There followed 38 years of distinguished contributions to M.I.T.

## **Good Teaching Awards**

Six young staff members of the M.I.T. Department of Electrical Engineering have received awards of \$500 each for excellence in teaching.

Four of the awards, from Supervised Investors Services, Inc., went to Martin Eisenberg, '63, Mitchell B. Lazarus, Ronald W. Schafer, and Alton P. Tripp, Jr., '63.

Carlton E. Tucker Awards, established in 1962 on the retirement of Professor Tucker, Executive Officer of the Department for many years, were given to Walter H. Berninger, '63, and Ronald R. Parker, '63.



(Continued from page 16)



DEAN FASSETT

## The Dean from Maine Retires

Frederick Gardiner Fasset, Jr., came up from Maine to the Department of English and History in 1930. He was vigorous, decisive, accurate in language, and wore a small black moustache. Tired of the Indians Down East, he entered on the project of teaching technological barbarians to write. He fell in with Paul Eaton, '27—now, too, a dean—and together they wrote a composition book, always known as "Fasset and Eaton," which the Department used in the interstices of freshman history. And soon, with Arthur Watson, Fred put together a collection of biographical writing to use in the sophomore year. He was slyly changing things.

Just about this time, however, when composition was replacing history for freshmen—largely at the push of Vannevar Bush, '16—Jim Killian, '26, decided to become second in command to Karl Compton, and Fred Fasset, who always maintained he was a newspaperman and can claim credit for the virtues of *The Tech*, took Killian's place as Editor of *The Technology Review*.

Then war came, and Van Bush took Fred to Washington to edit Carnegie Institution publications. These

years have always remained mysterious to Fasset fanciers, for, when Fred returned at last, the moustache had grown, the smile become all-embracing, the vest and chain a fixture, and the language slow, elegant, and carefully placed in quotation marks. One can only guess that Fred's war years were spent in the company of old-style Southern senators.

When Fred returned, pursuing his  
(Continued on page 69)

Mr. Kane (right) with H. B. Richmond, '14, first Chairman of the Alumni Fund Board, and Dwight C. Arnold, '27, Alumni Fund Board Chairman in 1957-1958, at a recent meeting of the Alumni Council. The originator of the Bronze Beaver Award, Mr. Kane received one himself.



## Fund Director Retires

Henry B. Kane, '24, retired last month after 26 years as Director of the M.I.T. Alumni Fund. When he was appointed to the position, annual contributions from Alumni amounted to \$65,000. In 1956, giving had increased to more than a half million dollars. This year, the Fund exceeded \$2 million. All told, Alumni have contributed about \$11 million during his tenure.

With retirement, Mr. Kane will devote most of his time to his second career as author and illustrator of books on nature. Drawing on his intimate knowledge of the wild, he has written and illustrated 13 books and done illustrations for 36 others.

His own books include two sets of nature tales—a series of six, called *Wild World Tales*, written in the 1940's, and three later books entitled, *The Tale of a Meadow*, *The Tale of a Pond*, and *The Tale of a Wild Goose*. Last fall, he published *Wings, Legs or Fins*, a book about how animals get about.

Among the books he has illustrated are Thoreau's *Walden*, John Kieran's *Natural History of New York City*, and J. J. Rowlands' *Cache Lake Country* and *Spindrift*. Most recently, he illustrated David McCord's volume of children's verse, *All Day Long*, and *Flash! The Life History of a Firefly*, by Harris and Harris.

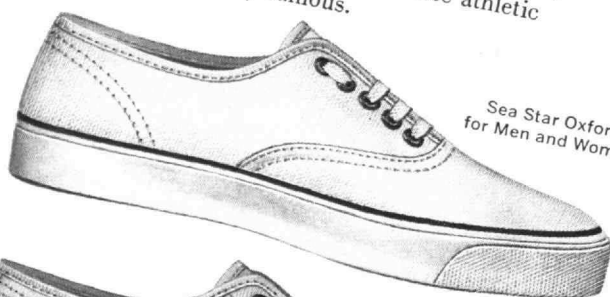
Known to associates and to thousands of Alumni as "Chick," he has always remained close to M.I.T. A native of Cambridge, he attended Phillips Exeter Academy, then came to the Institute to study General Engineering. He was an illuminating engineer and then in the advertising department of Boston Edison Company for several years before coming to M.I.T. as an administrative assistant to President Karl T. Compton shortly before the Alumni Fund was established.



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(Continued from page 67)

vocations and avocations, he became director of the Technology Press, then a one-room, one-secretary operation, where the infinitely careful eye of the old newspaperman purified language and mechanics. In the churnings of Building 10, however, and for reasons unexplained except by happy outcome, Fred became a dean, Dean of Residence.

For these last 10 years the Fassetts have been father and mother to successive generations of undergraduates, male and female. Beds have been found; riots have been stopped—though once the Dean is said to have encouraged a raid on Radcliffe; students have been bailed from jail, eased from court conviction, listened to, encouraged, admonished, given tea and cake and peanuts and sociability in what must have been for many the major sight of gentle manners the Institute allowed. And the Institute is wise

enough to know that, however much it needs a Fasset, there can be no substitutes or successors.

IFC, All-Tech Sing, Dorm Coms, the Campus Patrol, and many another organization and assembly have heard the careful, witty, urbane—and occasionally indignant—voice of the Dean, and in the last few years students have heard him teach again in a course on James Joyce, whose vocabulary of known words and fabrication of new ones seem to delight the Fasset ear.

For many years the Fassetts spent their summers on the shore of Snow Pond in Maine. Now they propose to go down Maine again, to a lake at Damariscotta Mills, which Fred reports to be a swamp full of eels and muskrats. He will not have to find beds for any of them. When he came up in 1930, he and Julie and their respective parents were reputedly the only Democrats in Maine. Now things are different, and in order to be in opposition, the only respectable pose for an editor, Fred may have to sound something like a Republican. It will hurt.—*William C. Greene (Professor of English and Secretary of the Faculty).*

## Association Elects

Members of the M.I.T. Alumni Association this spring elected Theodore A. Mangelsdorf, '26, as President for 1966-1967; William J. Sherry, '21, as Vice-president for one year; and Howard L. Richardson, '31, and William S. Edgerly, '49, as Vice-presidents for two years.

Four Executive Committeemen were elected: Harold C. Pearson, '23, for a one-year term; and Robert S. Gillette, '36, Russell L. Haden, Jr., '40, and F. Richard Meyer, 3d, '42, for two-year terms.

For the honor of a five-year period as Alumni Term Members on the M.I.T. Corporation, the Association selected John K. Jamieson, '31, John Lawrence, '32, and George R. Vila, '33.

Elected to three-year terms on the National Nominating Committee were: E. Hibbard Summersgill, '36, from District 3; C. William Hargens, 3d, '41, from District 6; and Arthur G. Hall, '25, from District 7.

Class Representatives on the Alumni Council were elected also.

(Continued on page 73)

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## When the Bucentoro Sailed

(Concluded from page 50)

dancing." He added: "One recalls only vague and transitory impressions of chaos, of mysticism, of ancient peoples, of the struggle of forces through the Dark and Middle Ages, and finally of Civilization and the dawn of a new era of order and science."

Formal dedication of the new Cambridge buildings took place on Wednesday, June 14. M.I.T. President Richard C. Maclaurin presided and U.S. Senator Henry Cabot Lodge gave the principal oration. The observance ended that evening with a banquet in Symphony Hall that was linked by telephone to similar banquets being held by Alumni throughout the nation. It was a demonstration of what could be done with long-distance telephones and among the speakers was Alexander Graham Bell. Also present was Orville Wright, who counted several M.I.T. professors among his colleagues.

M.I.T. had been located in Copley Square buildings (except for its first year on Summer Street) since its inception 50 years before and in those days was known familiarly as "Boston Tech." (There have been claims, all unproven, that the familiar song, "I'm a Rambling Wreck from Georgia Tech," was originally written and sung by M.I.T. students for Boston Tech.)

With the end of its first half century, M.I.T. found the old buildings inadequate, inconvenient, crowded, and worn out. Under the leadership of President Maclaurin, funds were raised and construction started on 50 acres of filled land on the Cambridge bank of the Charles. The total original cost was \$7,000,000. Work started in 1913 and was sufficiently completed that the transfer of the school could take place three years later. The Class of 1916 was the last to be graduated at Copley Square. The architect was Welles Bosworth, '89, who died on June 3, 1966, at his home outside Paris, France, where he had been living in retirement. He was 97.

The M.I.T. that Bosworth designed was unique for a college at the time. Where tradition called for many buildings, each housing a separate academic department, Bosworth put M.I.T. all under one roof. Architecture historians John Burchard, '23, and Albert Bush-Brown in their book, *The Architecture of America: A Social and Cultural History* (Little, Brown & Co., 1961), called it "the best application of the City Beautiful movement to campus planning."

"Following the lead of Jefferson at the University of Virginia, Welles Bosworth placed a library in a rotunda at the summit of the plan, while a great lawn open to Boston across the wide Charles River Basin was framed by connected blocks of court-lighted buildings all connected by interior passageways."

"The plan itself offered flexibilities which were uncommon on traditional campuses whose individually separated buildings served to constrict the growth of the departments they housed while assisting to maintain departmental barriers."

"In the new M.I.T. all space was essentially interchangeable as to function (classroom, office, library, laboratory) and casual interdepartmental exchanges of ideas were common. If the neo-classic exterior belied the brilliance of Bosworth's plan . . . the building was nevertheless ahead of its day . . ."

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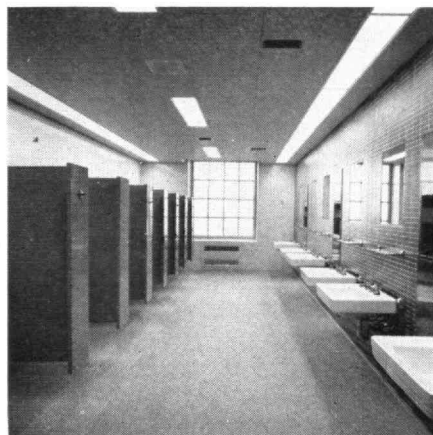
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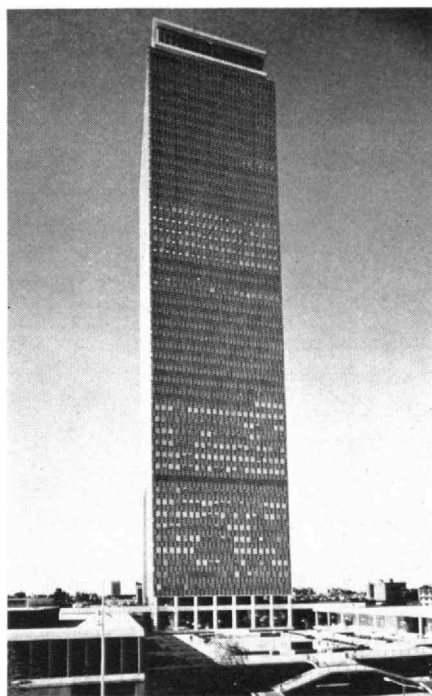
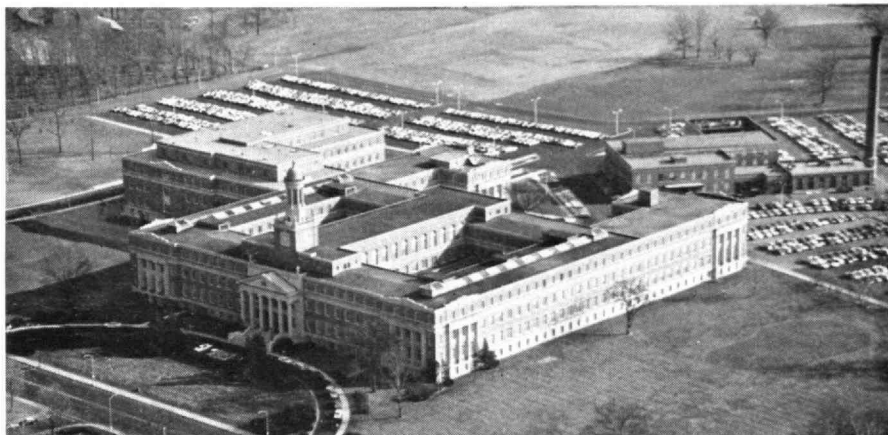


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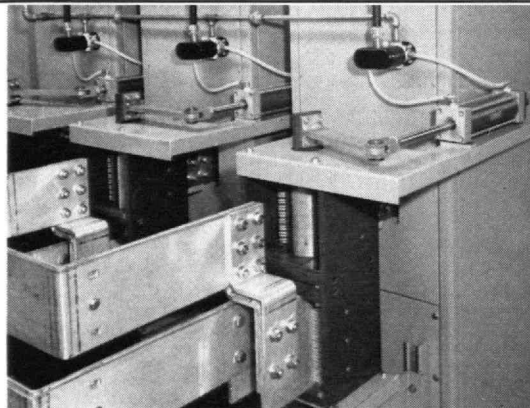
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## New Fund Director

Kenneth S. Brock, '48, Associate Director of the M.I.T. Alumni Fund for the last three years, has been appointed director, succeeding Henry B. Kane, '24, who retired this year.

Mr. Brock attended high school in Woburn, Mass., and studied business and engineering administration at M.I.T. He also studied at Tufts University, Boston University, and Cleveland College of Western Reserve University. He served in the Army during the Korean War.

He held marketing and advertising positions with H. H. Scott, Inc., The Gabriel Company, Workshop Associates, and Browning Laboratories and, before joining the Alumni Fund, was manager of market development for Fenwal, Inc., Framingham.

He has lectured in courses of the American Management Association and has been vice-president, Association of Industrial Advertisers, New England Chapter, and vice president



KENNETH S. BROCK, '48

of the Antenna Manufacturers' Association.

Mr. Brock and his family live in Medfield where he is a member of the Master Plan Implementation Committee, a former member of the Town Republican Committee, and a trustee of the Second Congregational Church.

## New Posts

Named in the news of promotions, elections, and appointments recently were:

*Leo Grossman*, '24, as Head, Junkyard Control Staff, U.S. Bureau of Public Roads . . . *Robert T. Armstrong*, '30, as Senior Vice-president, Celanese Corporation . . . *John Lawrence*, '32, as a Director, Santa Fe Railway;

*Dr. John J. Hanlon*, '33, as Professor and Chairman, Department of Community Medicine, School of Medicine, Wayne State University . . . *Kenneth N. Scott*, '34, as Vice-president, General Motors Corporation . . . *Jack I. Hamilton*, '36, as Vice-president, Cleveland Pneumatic Tool Company;

*Conover Fitch*, '37, as a Partner of the architectural firm of Perry, Dean, Hepburn and Stewart . . . *John S. Hamilton*, '39, as Vice-president and as General Manager, Wear-Ever Aluminum, Inc. . . . *James H. Schulman*, '39, as Superintendent, Optical Physics Division, U.S. Naval Research Laboratory.

(Concluded on page 74)

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## Honors to Alumni

*J. Howard Pew*, '03, named as the "Grand Old Man of Refining" by the International Petroleum Exposition . . . *Roderick K. Eskew*, '21, the Babcock-Hart Award by the Nutrition Foundation and the Institute of Food Technologists . . . *Hudson Hoagland*, '24, an Honorary Doctor of Science degree by Worcester Polytechnic Institute;

*Ralph F. Gow*, '25, the National Order of Merit Award, with the rank of Cavalier, by the French Government . . . *Frank Marcucella*, '27, an Honorary Doctor of Science degree by Franklin Pierce College . . . *Armand V. Feigenbaum*, '48, the Edwards Medal by the American Society for Quality Control;

*Harold P. Smith, Jr.*, '57, and *Walter J. Humann*, '59, named as White House Fellows, Washington, D.C.

## Director of Clubs

G. Peter Grant, '35, has been appointed Director of Clubs for the M.I.T. Alumni Association. He will be responsible for encouraging the growth of Alumni Club activities, including club programs and Regional Conferences involving Faculty speakers.

Mr. Grant entered M.I.T. from Phillips Exeter Academy. As an undergraduate he ran the M.I.T. Freshman Camp for two years, was president of the Technology Christian Association, served on the Faculty-Student Curriculum Committee, the Institute Committee, and on his Class Executive Committee as Class Secretary.

He rose from Chief Engineer to Vice-president—Sales, and in 1944 became President of Grant Photo Products, Inc., a manufacturer of photographic materials and operator of a nationwide chain of portrait studios. He holds eight patents relating to photography. When the company was purchased in 1960 by General Aniline & Film Corporation, Mr. Grant became market de-

velopment manager for its combined Ansco-Ozalid Divisions. This past year he has been teaching Market Research at New England College near his home in Webster, N.H.

Mr. Grant has served on the War Production Board Advisory Committee for Photographic Materials, on the Ferris Institute Advisory Board for Drawing Reproduction, as chairman of the Specification and Standards Committee of the National Photographic Manufacturers Association, Inc., and also as a director of that Association. Prior to joining General Aniline and Film Corporation in 1960, he led annual workshop seminars of the American Management Association on the "Responsibilities of the Chief Executive in Small Business."

Mr. Grant has been president of the M.I.T. Club of New York and a director of that Club, a governor of the M.I.T. Association of Cleveland, a member of the M.I.T. Athletic Advisory Board, an Honorary Secretary of the Institute, and has served as Class Agent for the Alumni Fund and in various other M.I.T. Fund raising activities.

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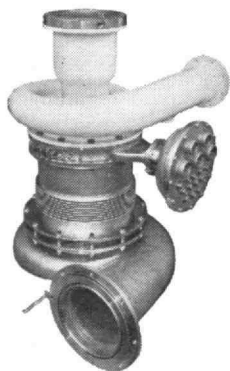
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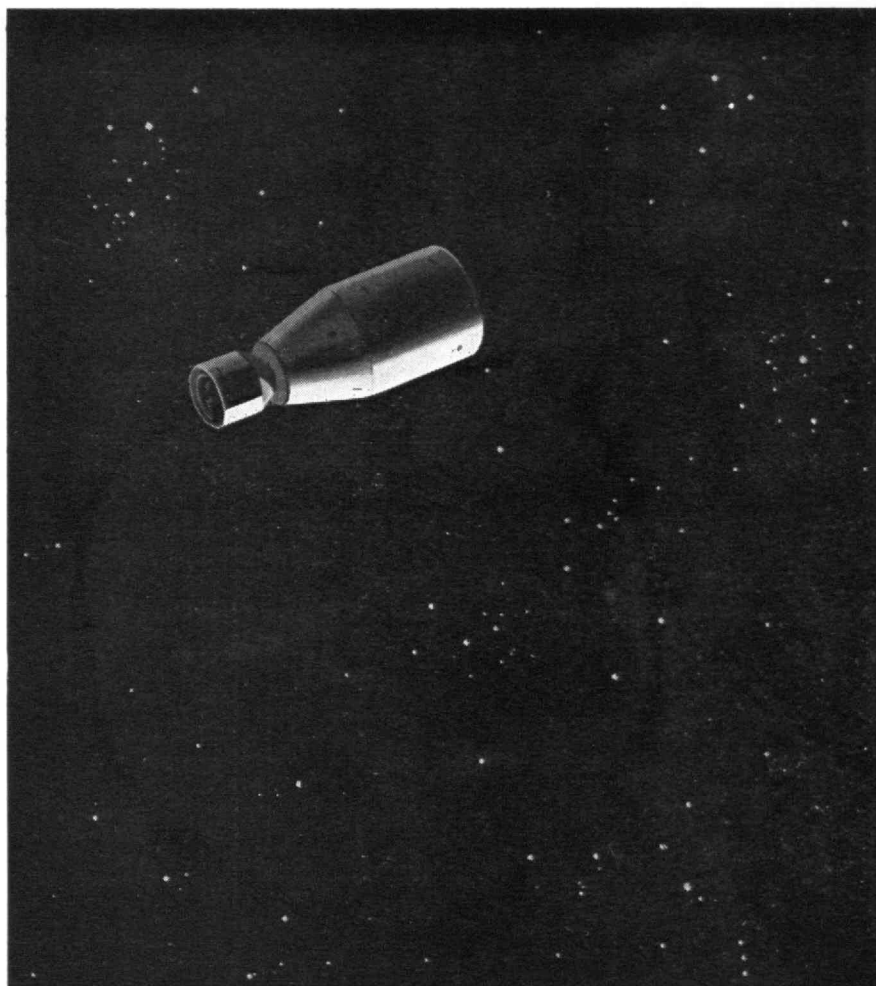
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# I NSTITUTE YESTERYEARS

## 25 Years Ago

On July 1, 1941, Henry E. Worcester, '97, Vice-president of the United Fruit Company, retired as the 47th President of the Alumni Association, being succeeded in that office by B. Edwin Hutchinson, '09, chairman of the Finance Committee of Chrysler Corporation; and A. Warren Norton, '21, retired as Vice-president of the Association, being succeeded by Harold Bugbee, '20.

Chester A. Corney, '14, and Professor Walter G. Whitman, '17, retired as members of the Executive Committee, which two vacancies were filled by the election of Herbert S. Cleverdon, '10, and C. Yardley Chittick, '22.

William S. Newell, '99, Frederick W. Garber, '03, and B. Edwin Hutchinson, '09, retired as Alumni Term Members of the Institute's Corporation, their successors for 1941-1946 being George J. Mead, '16, Robert E. Wilson, '16, and E. P. Brooks, '17.

■ The first year of the M.I.T. Alumni Fund was concluded, \$65,-

399 having been contributed by 7,867 Alumni.

■ During its first year of operation, the staff of the wartime Radiation Laboratory had increased nearly fivefold but the allotted space had not increased proportionately. In July, 1941, therefore, the Laboratory obtained 6,300 square feet of hangar space at the East Boston Airport, and in August broke ground for the permanent fire-proof building behind the main group in Cambridge, known as Building 24.

## 50 Years Ago

Stone and Webster's vouchers covering 34 months' expenditures for construction of the "New Technology," up to July 1, 1916, totaled \$4,609,554.40.

## 100 Years Ago

During the summer of 1866, President William Barton Rogers and his colleagues of the Institute's "Government" continued to be alarmed

by the mounting expenditures for the completion of the new Building at 491 Boylston Street, and by the prospective costs of finishing and fitting out sufficient classrooms for instruction of the increased registration anticipated for the following autumn. In September, 1863, when the erection of the Building had been authorized, the estimate of its cost was \$151,624, but during the ensuing three years expenditures had totaled \$219,356.68—and still the interior remained unfinished.

At the 53d Meeting of the "Government," held August 22, 1866, M. Denman Ross "urged . . . that the wants of the School during the winter of 1866-1867 would require many more rooms to be finished" than had been contemplated, and "an estimate was presented stating that the expenditure of \$15,000 would probably finish the whole interior of the Building except the large Hall."

The "Government" voted to authorize this additional expenditure.

*As recalled for Review readers by the late H. E. Lobdell, '17.*

	75 Years Ago 1890-1891		50 Years Ago 1915-1916		25 Years Ago 1940-1941	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
TOTAL REGISTRATION	937	100.0	1900	100.0	3138	100.0
Undergraduates	936	99.9	1833	96.5	2379	75.8
Graduate Students	1	0.1	67	3.5	759	24.2
Freshmen	250	26.7	429	22.6	578	18.8
States Represented	38		45		47	
Massachusetts	517	55.2	1060	55.8	951	30.3
Other New England	108	11.5	153	8.1	206	6.6
	625	66.7	1213	63.9	1157	36.9
Foreign Countries Represented	12		28		48	
Foreign Students	36	3.8	125	6.6	224	7.1
TOTAL STAFF	95	100.0	296	100.0	681	100.0
Faculty Members	31	32.6	117	39.5	285	41.8
Students Per:						
Staff Member	9.9		6.4		4.6	
Faculty Member	30.2		16.2		11.0	
TOTAL DEGREES AWARDED	103	100.0	364	100.0	864	100.0
Bachelor's	103	100.0	321	88.9	520	60.2
Master's	—	—	38	9.7	275	31.8
Doctor's	—	—	5	1.4	69	8.0

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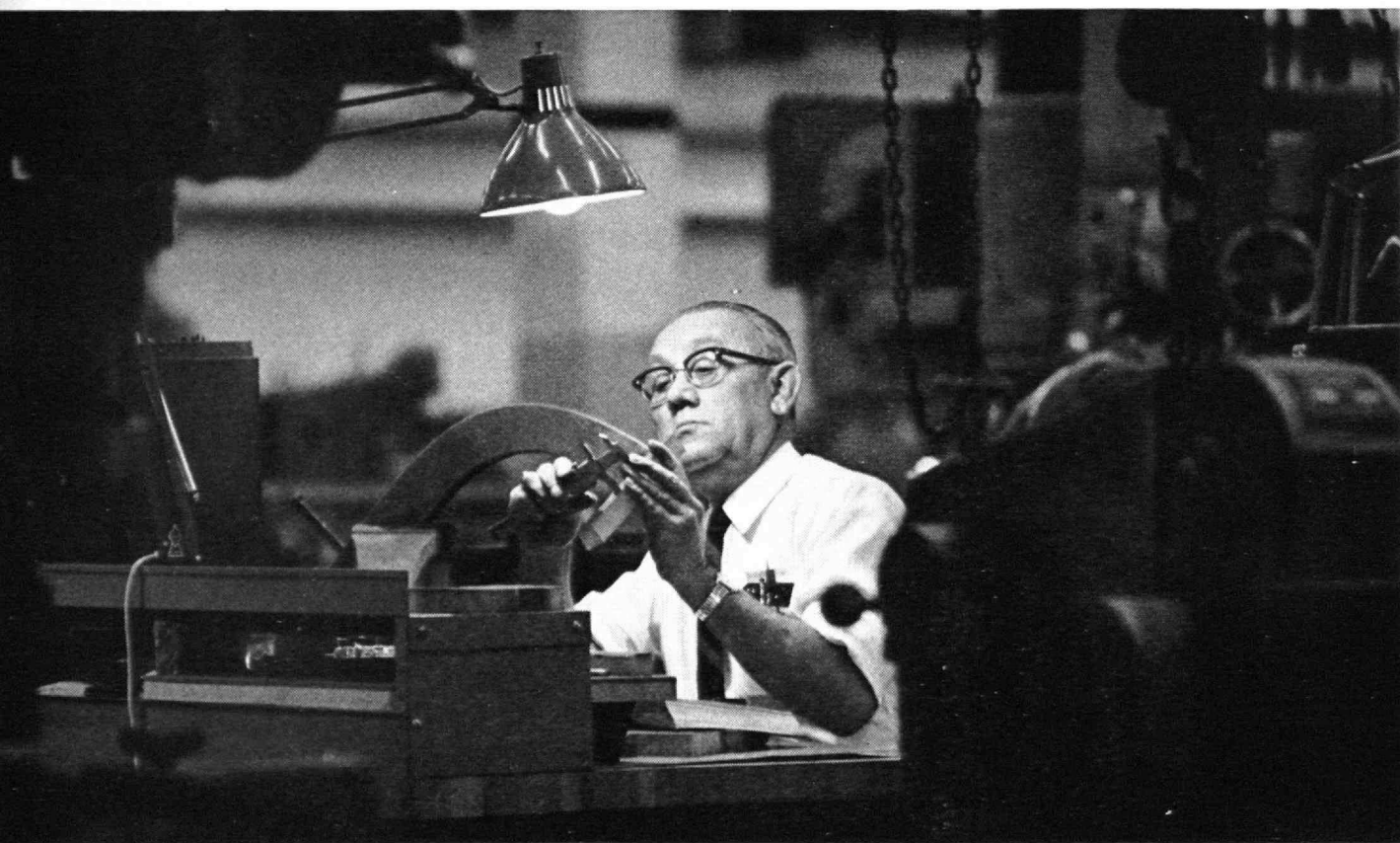
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his wife, Elizabeth, joined the vast army of displaced persons, and for six long years they drifted through the ruptured cities of Europe.

After much difficulty, the Simonffys were able to make their way to the United States, and the pieces started to come together again. First came a job as a drafting clerk, then a better one

as a draftsman, and finally, in 1950, a job with General Motors. Today, Louis Simonffy is one of the ablest and most respected toolmakers in the Company.

For him it was a long and arduous road from Budapest to Detroit. We, at General Motors, are happy to welcome such talented people aboard. GM turns out superior products because of them.



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## Class News



# '95

Although less than 10 of us remain to attend our annual meeting, we hope some will enjoy being at our gathering on June 13, under the tents on the Charles River, following the M.I.T. Alumni Association meeting.—**Andrew D. Fuller**, Secretary, 1284 Beacon Street, Brookline, Mass. 02146.

# '96

Reverend **Guy Louis Morrill** died in New York on March 17, 1966. He was born in Boston, descendant of Abraham Morrill, who came here from England in 1632; he worked as a civil engineer for the City of Boston for three years after leaving M.I.T. He went to the Princeton Theological Seminary and graduated in 1904 with an M.S. degree. While at the Seminary he entered the University as a graduate student. He was ordained a Presbyterian Minister and served as pastor in Moosic, Pa., Canandaigua, N.Y., and Edge Hill, Pa. In 1919 he joined the New Era Movement of the Presbyterian Church, with offices in New York City, as a director of the Stewardship Department. Later he worked with the Christian Education Department. He was author of several books on Stewardship. He participated in tennis, swimming, farming and baseball at M.I.T. He went to live in Canandaigua when he retired in 1935; a year ago he moved to New York City. He is survived by a daughter, Jean Gidney, and a son, Guy Judson, both of New York City, another son, Paul Hampton, of Carbondale, Ill., and six grandchildren.

**Albert Hubbard Spahr** died on April 1, 1966, at Fairbrook Farm, North Egremont, Mass. Born in Dillsburgh, Pa., he went to high school in Minneapolis and worked in the architectural office of Harry W. Jones. He was in Course IV at M.I.T. and while there won the Beaux Arts Medal from the Beaux Society of New York. After graduation he spent the summer in England and France studying design and on his return entered the office of Peabody and Stearns in Boston; after five years he went to Pittsburgh and there founded the firm of MacClure and Spahr. During World War I he was commissioned by the government to design and construct one thousand homes in Erie, Pa., for working men. With his 1961 Christmas card was a brief note in answer to the Secretary's request for news: "I broke my hip three years ago and although I get about I am not as steady on my feet as I was before. I keep busy, perhaps mostly mentally, with the activi-

ties of the farm and do a great deal of driving about the Berkshires when weather permits. Because of farm activities, our roads are well kept open after the snows and there are very few days that I cannot get out. My children and grandchildren and great grandchildren keep me on my toes. Last summer 14, all under 11, came for luncheon. There were times when I thought the house might be coming apart, but I do enjoy them." His wife, Carolyn (Wilson), whom he married in 1901, died in 1952. He is survived by a daughter, Mrs. George M. L. LaBranche of New York City and a son, Kimball of Englewood, Fla., both also of North Egremont; eight grandchildren and nine great grandchildren. The sympathy of the Class was sent to the families of the two deceased members.—**James M. Driscoll**, Secretary, 129 Walnut St., Brookline, Mass.

# '97

It is most gratifying to report a letter a month ago from **Ed Hawkins** and his daughter from Hingham, Mass. Although he has been physically handicapped for several years, he reports news and actions mentally as usual. He has a grandson in the Army in Korea. . . . To boast a bit, I have a nephew recently made a rear admiral. He is the son of my brother, John, M.I.T. Class of '02. This business of being 90 is far from what I contemplated when I retired at 70, as far as eyesight, locomotion, energy and penmanship are concerned.—**George R. Wadleigh**, Acting Secretary, 70 Flower Ave., Hastings-on-Hudson, N.Y.

# '99

**Jacob Stone, IV**, was born October 1, 1876 and died March 25, 1966. He cherished a portrait of his mother's great-grandfather, who was the last survivor of the Battle of Lexington in 1776 and a clock of his greatgrandfather's which was constructed in 1805 and is in good condition after more than 150 years. Jacob lived in Palo Alto, Calif., and is survived by a daughter Mrs. Sally S. Dickenson.

**George Otto Steinwedell, VI**, was born in Quincy, Ill., on February 9, 1877, and died in Hillsborough, Calif., on February 24, 1966. He was the son of Captain William and Louise Morton Steinwedell. His father organized the Quincy National Rifles guard in the civil war and died in 1910. His mother was born in New Orleans and died in 1901. George was a utilities executive in Denver and St. Paul

## Happy Birthday

In July one alumnus will become 90 years old; 13 will reach the age of 85; 16 will celebrate their 80th birthday.

July, 1876—**HAROLD W. BEDER**, '99, on the 23rd.

July, 1881—**EDGAR M. POST**, '09, on the 1st; **BENJAMIN D. SOLOMON**, '03, on the 2nd; **FRANKLIN O. ADAMS**, '07, on the 5th; **STANISLAUS SKOWRONSKI**, '04, on the 8th; **MISS LOUISE M. BOSWORTH**, '08, on the 11th; **ALLAN W. CROWELL**, '02, on the 17th; **CLIFFORD B. CLAPP**, '02, on the 18th; **WILLIAM H. CONANT**, '04, on the 21st; **WALTER D. ESTES**, '04, and **PHILIP B. RICE**, '03, on the 22nd; **C. WILLIAM WALLOUR**, '10, on the 23rd; **ALLAN H. BARROWS**, '05, on the 24th; **JOHN J. DOOLEY**, '03, on the 26th.

July, 1886—**LUDWIG F. C. HAAS**, '08, and **CHESTER J. RANDALL**, '10, on the 4th; **HENRY W. BLACKBURN**, '08, **RAYMOND J. PHELON**, '09, and **HAROLD W. WELLINGTON**, '08, on the 5th; **PAUL MCCLINTOCK**, '09, on the 6th; **JOHN C. DIEHL**, '10, on the 10th; **MYRON M. DAVIS**, '08, and **LAURENCE C. SHAW**, '09, on the 12th; **RUSSELL T. HYDE**, '08, on the 14th; **REUBEN W. BRUSH**, '10, on the 18th; **ANNIE P. HALE**, '07, on the 19th; **GEORGE E. WALLIS**, '09, on the 20th; **JOSEPH W. NORTHRUP**, '10, on the 21st; **FRANKLIN MOORE**, '09, on the 23rd; **HAROLD W. PAINE**, '09, on the 28th.

and for a number of years was general manager of the Binghamton Gaslight Company in New York State. Later he returned to St. Paul and St. Louis. He is survived by his widow, Ruth Steinwedell, and a son, Robert, of San Francisco. Another son George, Jr. died in the service during World War II.

On May 11 **Percy W. Witherell** was honored by a testimonial dinner and Official Review by Hugh de Payens Commandery, K.T. on his 50th anniversary as Past Commander and received a Certificate of Merit from the Grand Commandery. He is also a past master, past district deputy grand master, past high priest and past deputy inspector-instructor of the Grand Commandery, K.T. of Massachusetts and Rhode Island. . . . A large family group celebrated the 89th birthday of our president, **Norman E. Seavey**, on April 12. He excused his absence on Alumni Day June 13 because he and Mrs. Seavey are on a world trip to the Scandinavian countries and Australia, Hawaii and the west coast of the United States and return by the Panama Canal on July 28.

**James C. Dryer, VI**, was born on March 27, 1877, in Rochester, N.Y., and died there on May 8, 1966. In 1899 he joined the James S. Cunningham and Sons, Inc., and became the chief designer of their custom built automobiles. During his 41 years with the company it shifted from automobiles to electronics equipment. He became president and retired in 1940. James was a member of the Country Club of Rochester, the Genesee Valley Club and the St. Thomas More Church. In his younger days he was an enthusiastic sailor and maintained a rac-



ing sloop at the Rochester Yacht Club and took an active part in its races and regattas. His philanthropy was expressed by his support of the charities of the Rochester Friendly Home and St. Ann's Home. He is survived by a daughter, Miss Marietta H. Dryer and two sons, James C. Dryer, Jr. and Rufus K. Dryer II and a sister Miss Leora M. Dryer of Geneva.—**Percy W. Witherell**, Secretary, 1162 West St., Wrentham, Mass.

'01

I have had no class news sent to me. I will, therefore, close the year by wishing you all a pleasant summer and hoping for more help with news in the fall.—**Theodore H. Taft**, Secretary, P.O. Box 124, Jaffrey, N.H. 03452

'03

Some time ago we recall a questionnaire sent to Alumni from the Review office for the purpose of securing data pertaining to our extent of reading and choice of material within our Reviews received each month. We of course eagerly read our Class Notes, followed by such articles that pertain to our own courses. We then place each Review in our library and apparently fail to reread it, by giving more attention to popular science journals. I recently reread a 1945 Review from my neglected list. My interest was at once aroused by learning that the traffic enigma which clutters our daily newspapers and radio announcements was an uppermost problem at that early date, with attempt for its solution.

It noted that John L. Reid, '31, Associate Professor of Architectural Design at M.I.T., was then associated in the design of the Sill Building at Bakersfield, Calif. The building provided exterior cantilevered sidewalks on the street fronts. These sidewalks afforded balcony views to visitors and occupants of the building. There were no interior corridors at all; the design was suited to all regions where the climate not only permits but fosters such a solution. The various offices were reached by means of the corridors, which were directly connected to the elevator. The continuous glass areas of the offices, moreover, were protected by sidewalks, so the glare was eliminated and the cooling load in the air conditioning system was reduced. The office space, not being cut off by the corridors, was lighted from both sides with continuous windows. Even the office space secured unusual degree of flexibility. The windows and doors facing the exterior corridors were designed on a unit basis, permitting ready interchangeability, with interior panels constructed for easy removal or relocation. The air conditioning system was so planned that no matter where a partition was placed the resulting space unit was assured a sufficient amount of treated air.

In conclusion it seems an unbiased assumption that our former Reviews are a

continuous source of science reading. . . . We are obliged to announce the passing of two more members from our precious group: **Warren F. Currier**, V, of Philadelphia, Pa., on December 24, 1965, and **Walter Sohler**, II, at El Cerrito, Calif., September, 1965. We miss their interesting careers and again should demonstrate its value while active, for our remaining classmates and particularly for course associates.—**John J. A. Nolan**, Secretary, 13 Linden Ave., Somerville, Mass.; **Augustus H. Eustis**, Treasurer, 131 State St., Boston, Mass.

'04

We have little or no news to report this month, not having heard from a single classmate. The only good thing about this is that we have not been informed of any deaths. Why not drop a card to your class notes reporter so these notes will be more interesting reading?—**Eugene H. Russell, Jr.**, Treasurer, 82 Stevens Road, Needham, Mass.

'05

From an interesting letter from **Charlie Smart**, II, I learn that he is still very active in his surveying instrument research. He tells me that the Gurley (really Charlie's) Museum of Surveying Instruments has a collection of 131 American made surveying instruments. He began collecting them in 1958 and has travelled all over the U.S.A. to obtain antique instruments. He believes they have the largest collection of American surveying instruments in any single collection. Don't go through Troy without stopping to see it.

I have the sad duty of informing you of the death of **Rev. S. Atmore Caine** ("Sid") on March 13, 1966. I quote from a Philadelphia paper: "The Rev. Sydney Atmore Caine, 83, Vicar of St. Augustine Chapel, 1206 Green St., from 1942 until his retirement in January 1957, and a well-known Episcopal Clergyman, died Sunday afternoon in Sacred Heart Hospital. Father Caine was the husband of Dorothy Caine, and resided at 514 Launfall Rd., Plymouth Meeting. Father Caine came to St. Augustine's, a mission of St. John's Episcopal Church, in 1942 after clerical assignments in New York, Philadelphia and in Massachusetts. A graduate of the University of Louisville, he also held a Master of Science Degree from Massachusetts Institute of Technology; and was a graduate of the General Theological Seminary, New York. He was ordained as a deacon in the Episcopal Church by the Bishop of Massachusetts in 1910, and a priest by the Bishop of New York in 1911. After ordination, he served as a curate in St. Luke's Chapel, Trinity Parish, New York. Later he was assistant at St. Clements, 20th and Cherry Sts., Philadelphia, and was rector for more than 10 years at St. Timothy's

Church, Roxborough, Phila. Father Caine left St. Timothy's to serve the Church of the Advent in Boston, Mass., where he served for five years. He was assigned later to St. Margaret's in Brighton, Mass., a Boston suburb; and came to Norristown in 1942. Retired in 1957, he continued to serve on the staff of St. John's Episcopal Church here."

Mrs. **Eliza N. Rogers** (nee Elizabeth J. Newkirk) died at 4418 Spruce St., Philadelphia on January 6, 1966. She took special courses with us in 1904 and 1905. . . . We have one notice of changed address: **John E. Lynch**, II, 46 Mount Hood Terrace, Melrose, Mass.—**Fred W. Goldthwait**, Secretary, Box 32, Center Sandwich, N.H.; **Gilbert S. Tower**, 35 No. Main St., Cohasset, Mass.

'06

Although our Sixtieth Reunion will be a memory by July, it is still in prospect in mid-May and how many will attend is still a question. The two-page reunion letter was mailed to all living members in mid-April and 32 replies were received. The positive statement in the June notes was based on "intentions" as expressed in previous letters to me but I should not have been so definite about who was coming. As of today the couples expected to attend are the Chases, Rowes, Burpees, Fletchers, Foleys and Roses. Mike Gibbons will have a grandson with him and Guy Ruggles will have his sister Helen, other singles being Stew Coey, Allyn Taylor, Bill Abbott, and Andy Kerr. The Hoefers expect to be with us only at lunch on Alumni Day. Betty Coey isn't able to make the trip from Wilmington. Florence Taylor passed away suddenly on April 7 and a note of sympathy was sent to Allyn for the Class. Florence had just passed her 81st birthday and in June '65 they had celebrated their 50th wedding anniversary.

One of the reunion letters came back with a notation "deceased" and I have since received obituary clippings through the Alumni Office, reporting the death on March 24, 1966, of Dr. **Helen Ross Hosmer V-VII S.B.** She was born in Billerica, Mass., March 16, 1884, and prepared at Howe High School there. With the other six coeds in our class she was a member of that select club called "Cleofan" being secretary-treasurer in our junior year. Her thesis was An Investigation of the Formation and Composition of Insoluble Sodium Bismuthate. After graduating, Helen Hosmer had a professional pay job for 10 or 12 years as a G.E. Research Chemist at Schenectady; in 1920 as research chemist at Lakeside Hospital, Goodrich Social Settlement in Cleveland, and in 1925 back with G.E. for a few years. The obituary I have states that she earned "her medical degree at Tufts University in 1930," whereas in our Alumni Register of 1930 she was "a student, Albany Medical College, Albany, N.Y." However, regardless of where Dr. Hosmer earned her medical degree, she led from then on, a most useful and rewarding life

ministering to the needs and ills of mankind, in many fields and in many locations. In the early 20's she had made a start in that direction as she worked in the Orphanage of the Grenfell Association in Newfoundland. In April '28 her address was Font Grove, Slingerlands, N.Y. and in '31, after getting her M.D. degree, it was her home town of Billerica for a short time. In June 1932 she was at Kenka College, Kenka Park, N.Y., then followed a few years in private practice in Galway, N.Y. She joined the International Grenfell Association mission at Fortune, Labrador, by or before 1937, there ministering to Indians and Eskimos, and in 1940 was medical officer for the St. Mary's River District of that mission. In '42 Dr. Hosmer came back to the States, first as assistant physician at the Saratoga County T.B. Sanatorium, then by February '55 the Physician at Homestead Sanatorium at Middle Grove, N.Y., retiring around 1960 to Griswoldville, a village a few miles north and west of Greenfield and Shelburne, in the northwest corner of Mass. Services were held in nearby Heath with burial in Bedford. There was no mention of any relatives.

The notes in the November Review will—I hope—include a full account of our reunion, the Alumni Day doings, and the cruise on the Pleione II on Tuesday very kindly provided by Joe Santry, with whom I have just had a chat when he called from NYC. Were you one of those who replied to the reunion letter by sending along a newsy letter to Edward B. Rowe, Secretary-Treasurer, 11 Cushing Road, Wellesley Hills, Mass. 02181

'07

In reply to one of my birthday letters I sent out during March, I had a very gracious reply from Rear Admiral Alexander H. VanKeuren, of Aberdeen Road, Bethesda, Md. The Rear Admiral passed his 85th birthday on March 9, so is one of the older members of 1907. He attended college a short time in our class but received his S.M. degree in Course XIII-A with 1908 and attends various M.I.T. dinners in his area, where he is the oldest graduate present. He had a very interesting, active life with the Navy. He was known as an E.D.O. officer (Engineering Duty only). Here, his work was in Naval Architecture and Engineering. He had several tours of duty at Navy yards throughout the nation as construction officer and manager. In Washington he served as the last Chief of the Bureau of Construction and Repair, which was then merged into the Bureau of Ships, where he served as Assistant Chief and then as Chief, finally winding up his active duty as Director of the Naval Research Laboratory. Alex seems to keep very busy although retired. He is first vice-president of the Navy Mutual Aid Association, member of the Holland Society of N.Y., and the Netherlands America Foundation, a member of the Naval Historical Foundation, and president and secretary of the Class of 1903, United States Naval Academy. He lives alone, as his wife

passed away some years ago. He has a married son with three children in Chevy Chase; and his married daughter, with two children, lives next door to her brother. Three of his granddaughters are in college—Swarthmore, Vassar, and Smith. The other two are still in high school. Alex is very fond of children, and a dozen or more from the neighborhood drop in every day for refreshments and a chat. He reports that he is in good health and expects to play golf this summer. His hobbies are watching TV and doing crossword puzzles. If any of the naval architects remember Alex, why not write to him. I am sure he would appreciate it.

I also heard from Tommy Gould after sending him a birthday letter marking his 80th milestone. He hopes for a good attendance at Alumni Day this year at Cambridge and that we plan for our 60th Reunion next June 1967 at Oyster Harbors. . . . Very shortly after Bob Albro's death last February, Mrs. Albro was taken critically ill and spent eight weeks in a hospital which accounts for my not hearing from the family relative to Bob's death. I have recently received a very nice letter from her and include various bits of information that she sent. Bob had not been able to stand alone or walk without the aid of a walker for over two years. He was able, however, to go to ride in a car. He had been, as usual, always happy, cheerful, and interested in all sports he could see on TV or read about. He was taken suddenly ill on January 9 and

died February 1 in Springfield Hospital due to a pulmonary embolism. Mrs. Albro plans to move into a small apartment and is very grateful for the nearness of all her children and their help and devotion to her.

John Mahar's sister Elizabeth wrote me in answer to my letter of sympathy to the family. John had been married, but his wife died many years ago and he never remarried. For the past 18 years he lived with his three sisters and a brother, James J., Course II, M.I.T., 1902, in Dorchester. After graduation, John worked for Aberthaw Construction Company, The Boston and Albany Railroad in the Signal Service, The American Agriculture and Chemical Company, designing and estimating the construction of chemical plants through the South and Atlantic coastal states. After spending some time with the Boston Structural Steel Company, he became associated with Fay, Spofford and Thorndike and was sent to Alaska where they were engaged in Government work. During recent years John had cardiovascular trouble, and death was due to a shock.

The Alumni Register sent me, on April 15, a notice of the death of Charles M. Hutchins, III, 23 Amherst Road, Port Washington, N.Y. No date of his death was given, but a note stated that he had passed away some months ago at Saranac Lake, N.Y. Charles was carried on our non-active list, although his name and picture are shown on page 21 of our Sen-

## Deceased

WELLES BOSWORTH, '89, June 3  
EDWARD I. MARVELL, '94, May 5  
GUY L. MORRILL, '96, March 17\*  
ALBERT H. SPAHR, '96, April 1\*  
CHARLES E. STAMP, '96  
JAMES C. DRYER, '99, May 8\*  
GEORGE O. STEINWEDELL, '99, February 24\*  
JACOB STONE, '99, March 25\*  
CHARLES L. DEAN, '05, May 11  
MRS. ELIZA N. ROGERS, '05, January 6  
HELEN R. HOSMER, '06, March 24\*  
BURTON W. KENDALL, '06, March 31  
CHARLES M. HUTCHINS, '07\*  
HUGH PASTORIZA, '07, March 22  
JAMES P. STOW, JR., '07, February 8  
ARTHUR L. GARDNER, '08, April 1  
HOWARD W. CONGDON, '09, April 27\*  
CORA B. GROSS, '09, January 24, 1965  
ROBERT WEINSTOCK, '09, September 1  
ROYAL M. BARTON, '11, November 16  
ROGER T. BOYDEN, '11, March 8\*  
RALPH A. HOLBROOK, '11, April 22  
EUGENE T. MARCEAU, '12, April 20\*  
CLARENCE J. BERRY, '13, November 12  
MAX H. HARRINGTON, '13, May  
EDWARD A. HUBBARD, '13, March 20  
HAROLD T. BENT, '14, April 1\*  
ARTHUR F. PEASLEE, '14, May 4\*  
HARRY M. WYLDE, '14, May 19  
JACOB GINSBERG, '15, August 11  
RALPH P. JOSLYN, '15, May 13  
EDGAR L. KAULA, '16, April 12\*  
EDWARD A. WEISSBACH, '16, April 24\*  
CLARENCE AUTY, '17, April 23\*  
EVERETT L. GAYHART, '17, November 24, 1964\*

EARL COLLINS, '18, April 8\*  
RODERIC M. BLOOD, '19, March 13  
JOHN E. CASSIDY, '19, August 22  
CHARLES J. FARIST, '19, April 21  
WILLIAM E. MEISSNER, '20, April 20\*  
ZELMA ZENTMIRE, '20, March 31  
WINTER DEAN, '21, March 28\*  
ARTHUR ESNER, '21, November 3, 1964  
MERRILL A. YOUTZ, '21, September 21, 1964  
GROVER C. KLEIN, '21, September 26\*  
GEORGE W. POLLOCK, '21, November 11\*  
HARVEY F. RETTEW, '21, December 29\*  
BRADFORD SMITH, JR., '22, February 13\*  
THOMAS E. HUFFMAN, '23, February 12  
HARRY P. KELLEY, '23, February 19\*  
HOWARD B. KEPPEL, '23, July 19, 1965  
PRESTON H. SCOTT, '24, May 8\*  
THEODORE A. MCENDREE, '25, April 19  
BRUCE T. HUMPHREVILLE, '26, April 15\*  
PAUL C. WOODBURY, '27, April 20\*  
HENRY M. GAHAN, '30, May 14  
RICHARD S. BALDWIN, '31  
E. TYLER PARKHURST, '31, November 27\*  
MAURICE A. COOPER, '32, May  
RICHARD J. MARCUS, '32, February 5\*  
WILLIAM H. RADFORD, '32, May 9  
ALFRED H. MUNSON, '33, April 7  
PAUL W. COMSTOCK, '39, April 6  
JOHN A. THOERLE, '43, August 18\*  
JOHN V. MCCARTHY, '45, February 21  
THOMAS F. MCGRAW, '48, November 22  
FRANK VIERA, JR., '48, April 6  
CAROLYN B. PARKER, '53, March 17  
ALFRED DANTI, '58, May 17  
PHILIP A. STERN, '58, September 3  
FRANK E. WEISER, '58, July 10, 1965  
JOHN S. STRANO, '59, May 23  
\*Further information in Class News



ior Portfolio. He never attended any of our Reunions or Class functions. His associate member's card shows that he spent some time in the Trudeau Sanatorium in Trudeau, N.Y., in 1937. He was married to Mrs. Theresa B. Cannon at Albany, N.Y., in December 1916 and that in 1946 he was living in Duxbury, Mass. Your Secretary wrote to the family, and I hope to furnish you with more details in a later issue of these notes.

It is with much personal regret that I record the decease of **Hugh G. Pastoriza**, VI, on March 22 at Greenwich, Conn. A clipping from the N.Y. Times is the basis for the following information. He died in the Greenwich Hospital after a brief illness. His home, at 10 Oriole Ave., Bronxville, N.Y., was with his son, James J., Class of '48, M.I.T. After receiving a Master of Science degree at M.I.T., Hugh went to Harvard and obtained an M.S. degree there. His early years after college were spent in power plant design and construction work, largely in Utah. For about 40 years, until the late 1950s, he was a security analyst in New York City for Coffin and Burr, members of the New York Stock Exchange, where he specialized in the analysis of electric and gas utilities. During World War I Hugh served in France as an Army major. He was a former president of the Bronxville School Board and was a member of the Harvard Club of New York, the New York Society of Security Analysts, and the American Society of Mechanical Engineers. Surviving are a married daughter, three married sons, Hugh, Jr., M.I.T. '43; James J., M.I.T., '48; and Ralph B. He also left 13 grandchildren. It was not until our 40th Reunion in 1947 that we became well acquainted with Hugh. After that he attended all our regular five-year Reunions. On Alumni Day, 1963, he attended with his son James, '48 and spent part of the noon luncheon period and the banquet hour with '07.

Please note on your Class Roster of living members of 1907 a change of address for **Louis A. Freedman**. He is now to be found at 989 8th Avenue, New York, N.Y. 10019. You have all received from **Don Robbins**, our President, literature relative to "deferred giving" to M.I.T. Many times we intend to do such a thing but keep putting it off until we, as well as the money, have gone elsewhere. The old adage, "Do it now" is a good one to follow.—**Philip B. Walker**, Secretary and Treasurer, 18 Summit St., Whitinsville, Mass.; **Gardner S. Gould**, Assistant Secretary, 409 Highland St., Newtonville, Mass.

'08

The second dinner-meeting of the 1965-66 season was held at the M.I.T. Faculty Club, Cambridge, Mass., on Wednesday, May 4, at 6 p.m. The following were present: **Bunny Ames**, **Bill Booth**, **Nick Carter**, **Ted Joy** and **Mrs. Joy**. Several of our regulars were still vacationing in the south. We met in the cocktail lounge where over our chosen

tonics and the delicious crackers and cheese we talked over the doings of the past winter. About 6:30 we adjourned to private dining room 6 where we enjoyed a delicious dinner. There were no Kodachromes, so we adjourned early. Best wishes for a happy summer.—**H. L. Carter**, Secretary, 14 Roslyn Rd., Waban 68, Mass.; **Joseph W. Waffles**, Treasurer, 26 Bullard Rd., Weston 93, Mass.

'09

We were pleased to hear from **Ken May**, who retired from the investment business some time ago and now lives in Newton, Mass. with his wife (Frances S. May, Smith College, 1909). Ken has three children. Margaret (Smith College, 1937) and her husband Henry Harwood, who is in the fuel business in Newton Center, have eight children and five grandchildren. Ken's second daughter Elizabeth (Smith College, 1940) is married to John E. Dorer, an engineer with DuPont in South Carolina. They have four children—one daughter at Smith College, a son at Lehigh, a daughter at Northfield School for girls, and a son, a junior in high school. Ken's son George (Amherst, 1946) married Ann James (William and Mary). They have three children, none of college age, their son Kenneth attending Loomis School in Connecticut. George is comptroller of Amherst College and a trustee of the Northampton School for Girls. Adding, the May's have three children, 15 grandchildren, and five great grandchildren. They celebrated their 52nd wedding anniversary last September. Ken states that his two principal activities are the classifying and filing of some 6,000 slides reminiscent of the several trips he and Frances have taken, and attending the ever-occurring birthdays and anniversaries which alone keep them very busy. The Class congratulates Ken and Frances on their long married life together and on their several children, grandchildren and great grandchildren, all of whom are seeking or have attained higher education and useful careers.

In the May Review we told of **Howard Congdon** having been hospitalized because of a broken hip, and we all hoped for a speedy recovery. It was with deep regret that we learned from a letter sent by his wife to **John Davis** that he had passed away on April 23 in Hingham, Mass., at the age of 82. Funeral services were held in Hingham with burial in Swan Point Cemetery, Providence. We have written Ruth telling of his great loss to the Class and expressing its sympathy as well as our own. Howard received the Master of Arts degree from Brown in 1907 and was elected to both of the honorary societies, Sigma Xi and Phi Beta Kappa. Space does not permit reciting all his achievements as a civil and structural engineer. At different times he was employed by such outstanding engineering firms as Fay, Spofford and Thorndike, the Bethlehem Steel Company at

the Fore River and Hingham Shipyards, and Clifford Rhoades of Boston. Later he formed the firm of Congdon, Guernsey and Towle, Inc. A long obituary notice, which appeared in the Providence Journal, paid a most fitting tribute to his successful engineering career. We all remember Howard as a faithful member of the Class as well as of the Institute. He attended with his wife Ruth and often with his son John several Class Reunions and Alumni Day gatherings, notice of which appeared in these class notes. John was graduated from the Institute in 1957. Besides his wife and John, he is survived by a daughter, Mrs. Caroline C. Snow of Kodiak, Alaska, and two granddaughters. Ruth states: "I have two wonderful children and they are a great comfort to me." Howard was a life member of the American Society of Civil Engineers, a former trustee of the Evangelical Congregational Church of Hingham, former member of the Hingham Yacht Club, and a member of What Cheer Lodge F & A.M. of Providence.—**Chester L. Dawes**, Secretary, Pierce Hall, Harvard University, Cambridge, Mass.; **George E. Wallis**, Assistant Secretary, Wenham, Mass.

'10

Correspondence is very meager this month and your Secretary is going to take a trip to the Caribbean for two weeks or more and will be back for Alumni Day on June 13. . . . **Elbert D. Greene** died February 6, 1966. . . . **Walt Spalding** writes from Hawaii as follows: "This is surely a belated note of our congratulations on your marriage of several months ago. Your note about it in the Class Notes in the Review was so very brief, considering the importance of the event, that we were expecting more details in a later issue. That is one alibi and another is the month's visit with us of my son, W.T.S. Jr. from Cleveland with his wife and three children; one a boy of nine and another of one and very lively girl of four. However we two have often spoken of how good it must be for you to have a home again, with someone to enjoy it with you; and we do sincerely felicitate both of you. We had a wonderful but strenuous four weeks with our family guests and spent over one week at Kilauea Military camp near the volcano and at Napili Bay on Maui, although their delight in the ocean swimming provided for no dull moments here at home. Then our galley proofs of our new paperback book, The Self-Teaching Edition of the Writing Road to Reading, came to take our attention for 10 days. On June 28 we fly to Seattle and on to Toronto via boat and C.P.R. for a two weeks class for teachers, then a similar one at Worcester, Mass. (whence we may see you in Boston) before a week in New York. Then we have another two weeks class in Windsor, Vt., and a last one, then in Scarsdale, N.Y., before going to England and Paris for a month in September."—**Herbert S. Cleverton**, Secretary, 120 Tremont Street, Boston, Mass.



# '11

**Roger T. Boyden**, retired director of the Interstate Commerce Commission's Bureau of Finance, died of a heart ailment March 8 at Suburban Hospital, Washington. Roger was chief of the section of loans and reorganization from 1932 to 1954 when he became head of the Bureau of Finance. He did not graduate with us, but took his bachelor of science degree from George Washington University in 1921 and a doctor of laws degree from the same University in 1925. He joined the ICC's Bureau of Valuation in Boston in 1916 and stayed with the agency for nearly 42 years . . . On a pleasanter note, the Boston Traveler of May 6 carried a picture of **Marshall Comstock**, his wife and his three children: Mrs. Carter White, Mrs. Rand Smith and Charles Comstock. They had just celebrated their Golden Wedding. They have nine grandchildren and the graduation of one of them from college kept the Comstocks away from the 55-year Reunion. . . . On May 11, Alma and I called at the **Roy MacPhersons**. We missed Roy as he was at the Town River Yacht Club in Quincy getting his boat ready for the summer in the expectation that his eye sight will be good enough so he can use it. He had a cataract removed from one eye in November. However, we had a pleasant visit with Ina, who had recently returned from a week in the hospital. . . . These notes depend on your writing to Obie.—**Oberlin S. Clark**, Secretary, 50 Leonard Rd., North Weymouth, Mass. 02191

# '12

**Gene Marceau** passed away on April 20 after a short stay in the hospital. He and Sadie went to Florida 16 years ago on account of his heart condition but by taking care of himself he has led a very interesting life. When we visited him several years ago his collection of sea shells was simply stupendous, as they lived near the beach in St. Petersburg. After graduation, Gene instructed at the Institute for a year and then became control chemist and factory manager of N. K. Fairbanks Company. He was later manager of a department with Gold Dust Corporation. He then became Director of Research and Development for Hecker Products Corporation, which later became Best Foods Inc. From 1939 to 1946 he was supervisor of research at Lever Brothers. He was the inventor of a process for soap products and manufacture by spraying. He is survived by his wife Sadie now living at 1728A 20th Avenue North, St. Petersburg, Fla., and by his three married daughters. . . . **Cy Pettingell** made a wonderful recovery from his heart condition and was in Texas this past winter and reported a pleasant visit with **Johnny Noyes** in Dallas.

**Phil Dalrymple** is active with the engineering firm of Jackson and Moreland after 25 years. He tells me he rates as a

mechanical design engineer but is called upon for all sorts of difficult design work. The firm has grown to 500 engineers and was formed by the former head of electrical engineering at the Institute, **Dougald Jackson**. . . . **John Lenaerts** has left Venice, Fla., and will be at the Lily Pond Garden Apartments, Country Club Drive, South Yarmouth, Mass. 02664 for the summer. . . . **Walter P. Green** who winters in Florida will be at Craftsbury Common, Vt., for the summer. . . . **Bill Bird** has moved from Longmeadow, Mass., to 101 Mulberry Street, Springfield, Mass. 01105. . . . Just a word of reminder that a year from now we will hold our 55th Reunion. Start making plans now to be with us.—**Frederick J. Shepard, Jr.**, Secretary, 31 Chestnut Street, Boston, Mass. 02108; **John Noyes**, Assistant Secretary, 3326 Shorecrest Drive, Dallas 36, Texas

# '14

The following clipping from the Times Herald of Hampton Roads, Va., comes to us via **Harold Richmond**. The clipping includes a photograph of **Harold T. Bent** who died on April 1, 1966. "Harold Townsend Bent, 74, of 120 Dogwood Dr., Newport News, former vice-president and works manager of the Newport News Shipbuilding and Dry Dock Company, died yesterday in Riverside Hospital after a lengthy illness. A native of Boston, Mass., Mr. Bent had been a resident of the Peninsula for 52 years. He was retired from the shipyard in 1957 after 43 years of service. He held a bachelor of science degree in naval architecture and marine engineering from the Massachusetts Institute of Technology. Mr. Bent joined the shipyard after graduation from M.I.T. in 1914. In 1923 he was transferred to the general manager's office to help develop a materials control system which remains valid today. He became assistant superintendent of the steel hull division in 1927, was named superintendent in 1936, became production manager of the company in 1947 and works manager in 1954. He was elected a vice-president in 1955. While Mr. Bent was in charge of construction of all hulls, between 1927 and his retirement, many significant ships were built, including the USS Ranger, the first aircraft carrier designed as such, the SS America and the SS United States, the finest American passenger vessels, and many naval vessels, including nine Essex class and two Midway class airplane carriers. Active in yachting, he served several terms as commodore of the Hampton Roads Power Squadron. Surviving are his wife, Mrs. Dorothy Lavery Bent; a son, Harold Townsend Bent, Jr. and two grandchildren, all of Newport News." The sympathies of the class go to Dorothy Bent and the rest of the family. Harold and Dorothy attended our 50th Reunion.

It is our unpleasant task this time also to record the passing of one of our other Fourteeners whom we saw quite a little of in recent years, **Arthur F. Peaslee**. The clipping from the Hartford Courant of May 6, 1966 tells the story. "Arthur Peas-

lee, 73, Dies; Ran Construction Firm. Arthur Frank Peaslee, 73, of 78 Van Buren Ave., West Hartford, President of A. F. Peaslee Inc. Construction Company, died Wednesday, May 4, at his home. Mr. Peaslee founded his firm in 1923. The company constructed the first building at the University of Hartford, some of the buildings of the Institute of Living, Trinity College, Connecticut College for Women, the American School for the deaf and a number of private schools in the state. It also did work at the Wadsworth Atheneum, the State Library and erected the Litchfield County Hospital in Winsted. Among churches it has built are the First Church of Christ, Congregational, in West Hartford, and the Christian Science First Church. Mr. Peaslee was born March 9, 1893, in Plaistow, N.H., and moved to the Hartford area as a boy. He was graduated from Hartford Public High School in 1909. He attended Trinity College for two years, then went on to the Massachusetts Institute of Technology where he received a bachelor of science degree in civil engineering in 1914. In 1917, during World War I, he joined the Navy and received a commission as a lieutenant junior grade in civil engineering. He was a member of the Hartford Golf Club, the University Club of Hartford and was a past president of the Hartford General Contractors Assn."

We think you will be interested in the experiences of the **Dinsmores** these past months. "Dear Herman: Violet and I recently returned from an interesting 60-day cruise of the Mediterranean on the good ship, Independence (30,000 tons). Our general route was New York to Florida, across to Dakar, Senegal, then up and around the Mediterranean shore, staying mostly with North Africa and nearby islands on our way east, then the eastern coast of the Mediterranean, penetrating just to the Black Sea at Istanbul and back through the Greek Islands and along the southern shores of Europe. In doing this, we visited 23 countries and took 36 tours of varying lengths. Our trip over was remarkably smooth. Coming back it was rough enough to bar us from the Azores and from Nassau which was to have been an alternate stop. We chased warm weather, which eluded us until Luxor. Even after that, we only ran into about three hot days and these were barely in the nineties. However, the weather was almost always fair—we only had two days ashore when there were showers. Our impression of most of the African and Egyptian places where we stopped was of extreme poverty and ignorance, the exceptions being a minority wealthy group. There were some fine new public buildings and in places universities, perhaps the product of American gifts. Funchal, Madeira and its environs were beautiful—abundant water and terraced plantations on steep hillsides. Malta was of interest for two reasons. It was the real assembly point for the crusaders and it was continuously (but ineffectively) bombed in World War II.

"We had anticipated with great eagerness our trip to Cairo and Luxor. Despite the very unfavorable hotel conditions, caused by an overflow of stranded pas-

sengers from the France and the dirty, inefficient conditions in the hotel El Nil, at Cairo where we stayed two nights, we were fascinated with the things we saw. The Pyramids, the Sphinx and the Valley of Kings, the old mosques and temples are splendors from the past that cannot be denied a high place in the traveler's attention. I am afraid of getting in too many details from my kaleidoscopic recollections. We were, of course, interested in Jerusalem, Bethlehem, Jericho and the modern development of Tel Aviv. My two strongest impressions are amazement at the size of the Sea of Galilee and disgust at the sordid commercialization of everything near and in the Holy Land. We had an interesting visit with a Good-year dealer and his family on Sunday afternoon in Izmir. He is a Turk, but went to college in Berkeley and Stanford, so his English is colloquial American. Istanbul is another spot which has always fascinated me. I must mention the Blue Mosque as one of the finest interiors I have seen in an ancient church. Also that the Seraglio Palace had so many precious stones on exhibition that they detracted from any possible beauty, just as furniture does in a house jammed full of it. Greece and the Grecian Islands cannot satiate, no matter how often seen. No need to talk about Italy, so often described. We skipped Rome (on Easter) and instead of Pompeii went to Herculaneum, which we had never seen. It was certainly of great interest, but, compared with Pompeii a disappointment to us. Perhaps further excavation will change that. I was impressed by the rugged mountains of Dubrovnik, Yugoslavia. The people that I saw looked sober and industrious. The scenery in and around Barcelona, Spain and Ceuta and Tetuan (Spanish Morocco) was very attractive. We were interested in the school of Native Arts in Tetuan. Doing a good job, I should say. There are many other observations I could make, but will not. We had an unwelcome passenger throughout the trip—a cold epidemic that went around and around. However, with a few exceptions, people fought it off in a week or two and were ready for the next round. Like most Americans, I was glad to get back to the United States and shall complain less for awhile." Ray.—**Herman A. Affel**, Secretary, Rome, Maine. Mail: RFD 2, Oakland, Maine

## '15

Congratulations to the great Class of 1916 with the sincere hope they all enjoyed a happy and successful Fiftieth Reunion. What makes 1915 The Class Supreme—at a Class dinner April 15, at the M.I.T. Faculty Club, 25 classmates and guests, gathered for another enthusiastic, lively and enjoyable evening. **Pirate Rooney**, wearing his Skull and Bones costume opened the evening with a rousing "We are happy" cheer. Cocktails and a delicious Bill Morrison dinner put us all in a pleasant mood. An anonymous gift of after dinner cordials was very acceptable. Absentees we missed were Larry Bailey,

Sam Berke, Bill Brackett, Reggie Foster, Stan Osborn, Ben Neal, Chet Runels and Louis Young. Stan phoned from Hartford and Ben from Lockport—thoughtful guys. Present were Whit Brown, Wayne Bradley, Jack Dalton, Clive Lacy, Larry Landers, Azel Mack, Archie Morrison, Frank Murphy, Harry Murphy, Charlie Norton, Wally Pike, The Pirate and guest Al Efner, Jac Sindler, Bill Smith, Fred Waters, Eastie Weaver, Pop Wood, Max Woythaler and our regular Class adoptees, Herb Eisenberg 1952, David Hamburg, Jim Hoey, President 1943, Gerry Rooney and Bill Sheils. We want these "young members" of our Class to know that they certainly are welcome and we're always glad to see them. Although Speed Swift could not be with us, he sent a very funny poem on old age, which we read and which will later be circulated to the Class. The regular fierce long distance competition was fought out among Archie and Fred, Marblehead; Whit Brown, Concord; Max, Framingham; Charlie Norton, who again walked on the waters from Martha's Vineyard and a photo finish between Wayne Bradley, Moosup, Conn., and Pop Wood, Peterboro, N.H. A fine bunch of Classmates and guests to make this another outstandingly pleasant and friendly evening. Although we promised no speeches we had a "Minute man program." Max spoke enthusiastically about the gay M.I.T. Fiesta in Mexico City and the generous hospitality of our fellow Alumni down there. Al said a word for the big Class Cocktail Party on Alumni Day and Jack spoke emotionally about the fine, friendly spirit and feeling in our Class. A splendid evening, all around!

In June, Chick Kane retired as Director of the Alumni Fund, a position he has held since the Fund was organized in 1940. To Chick go the well wishes of our Class for a long, happy and enjoyable retired life, richly deserved for his interest and efforts in building the M.I.T. Alumni Fund up to its present successful position. . . . Glenn Jackson, a great 1927 man, is in Teheran, Iran, for two years and would be glad to see any M.I.T. men travelling over there. You could locate him at the bar in the U.S. Embassy in Teheran. (A nice headquarters).

**Ben Neal** wrote that **George Easter** and he represented 1915 at an April 21 meeting of the M.I.T. Buffalo-Niagara Falls Club. On May 8 at the annual meeting of the National Institute of Ceramic Engineers in Washington, George received the Greaves Walker Award for 1966. The award, established in 1960 in memory of the first president of the Institute, honors members who have rendered outstanding service to ceramic engineering and who, in their lives and careers, have exemplified the aims, ideals, and purposes of the Institute. George was with Carborundum Company, Niagara Falls, N.Y., from 1920 to 1947. At Carborundum he became director of research and later manager of research and development. He then went with Electro Refractories and Abrasives Corporation, Buffalo, serving as director of research from 1947 to 1961 and as technical assistant to the president from 1961 to 1963. Since 1928 he has been a member of the American Ceramic Soci-

ety's Refractories Division. After various committee and Division officer assignments, he was elected chairman of the Refractories Division for 1954-1955. He is a past president of the National Institute of Ceramic Engineers, a Fellow of the Society, and a member of the Canadian British Ceramic Societies, the Society of Glass Technology, and the Society of Professional Engineers. He is a registered professional engineer in the state of New York. An organizer of the Ceramic Association of New York in 1933, George was one of the first members of that organization's board of directors. He continued in that capacity until 1964, when he asked to be relieved. He holds some 60 patents relating to abrasives, refractories and furnaces. Congratulations to George for this high honor and his achievements to merit it. In answer to my letter, George wrote, "Thanks for your nice cordial note of April 30th concerning my forthcoming award which I interpret as just one more sign I'm getting old. However I have not given up yet! We spent a month this winter in Hawaii and I even got my wife to go for an outrigger canoe ride in the surf. She says the most fun since she used to ride roller coasters as a kid!"

**Mary Plummer Rice**, active as ever, attended the annual D.A.R. Congress in Washington in late April. She wrote it was exciting but exhausting. . . . On Patriot's Day, April 17, at a special ceremony, **Whit Brown** was presented the Honored Citizen Award by the Concord (Mass.) Public Ceremonies Committee. The glowing tribute said "Today's recipient is well deserving of this honor, for his life has been one of constant devotion to his fellow men and of striving to attain a better community and a better life for all. And his wife, Marjorie, is to be congratulated and admired for helping him to achieve this status." The award plaque read, "In recognition and appreciation of your patriotic, civic and community service to the town of Concord, often above and beyond the call of duty." Congratulations to Whit for such an outstanding honor. . . . While visiting **Charlie Norton** in Vineyard Haven, I saw **Frank Atwood**, 1941. Frank owns and operates a big motel in Edgartown and keeps busy in the real estate and construction business. . . . From Liberia, Africa, Vi and Dix Proctor, 1917, wrote us about their long freighter cruise in those distant waters. Personally, Fran and I prefer the ease and comfort of a regular cruise ship, with a bar. . . . In answer to my letter, **Allen Abrams** wrote, "Thanks for your very extensive coverage in the April issue. Indeed I am proud to be a member of such an illustrious class as 1915 and regret that time and distance prevent better participation in the activities. I extend hearty good wishes and invite wandering members to visit the great state of Wisconsin and especially the extraordinary city of Wausau!" . . . From Papua, New Guinea, **Ernie Loveland** wrote he was on his way to the Bismarck and Solomon Islands. What a Marco Polo he is! If you're up in northern New England this summer, be sure to drop in to **Wayne Bradley's** place, Moosilauke Inn at Warren, N.H.—you'll like it. . . . After a long, serious illness **Ben Neal's** wife,



Lauretta, died May 6 in Lockport, N.Y. The sincere sympathy of our entire Class goes to Ben in this sadness. So, here endeth our Column for another year, with many thanks, many blessings to you and your families for all that you've done to keep 1915 "The Class Supreme" and to help Azel.—**Azel W. Mack**, Secretary, 100 Memorial Drive Cambridge, Mass. 02142

## '16

Now that the 50th Reunion is behind us, we have a lot of thank-yous to send out, to the officials and officers at M.I.T. who helped to make Commencement and Alumni Days so memorable, especially to the Alumni Association personnel—Fred Lehmann, '51, Alumni Secretary, for all the many things he took care of for us in Cambridge, and Chick Kane, '24, for his inimitable illustrations in the Reunion folder, and all the others—and to Azel Mack Secretary of '15 for his friendly help and assistance all along the way. And to the Oyster Harbors Club, many thanks again. Even the New York luncheon boys of '17 openly wished us well, but not perhaps so well that they couldn't overtake us a year from now, on their own 50th Reunion and Alumni Day. And we trust that **Steve Brophy** and the hardest-working of his hard-working Reunion committee are able to stand the shock of relative inaction after all those months of frenzied activity up to reunion-time. We regret that a number of classmates were not able to attend for health or other reasons, but a fairly detailed report of the doings with a picture or two will go out to all before the winter months arrive. And the November class notes will give an account of the big and little happenings of the four-day program.

**George Tuttle**, up in Pembroke, Suncook, N.H., is fully enjoying what New Hampshire has to offer in his retirement. He and Marion moved from Buffalo to Pembroke to be nearer the families when he stopped working for Sylvania. He wrote: "Retirement was not my choice but I have had no other—hope to change this situation soon. We are very sorry not to be able to go to Cambridge and the Cape in June, and we appreciate all the nice letters we have received from my associates." . . . In mid-April **Arvin Page** wrote Ralph Fletcher from Winston-Salem: "I have definitely, though reluctantly, come to the conclusion that I should not attempt to be with you-all in June. This is a great disappointment to me as I have, for nearly 50 years, been looking forward to this reunion. This has been particularly true since you announced that a clambake was scheduled. I can think of nothing that causes my digestive juices to flow as freely as the thought of an old-fashioned clambake. It grieves me beyond words to have to miss it." . . . Our request for news from **Jack Camp** in Mexico City reached him at a time when he was so "swamped with urgent work", we had to agree to get what he had to say at Osterville, perhaps sitting right on the beach!

**Ken Sully** is bringing his new (1966) wife to the Reunion on the Cape, says he has already briefed her on M.I.T., and "we are looking forward to a wonderful trip to Boston as Emerald has never been there." . . . As **Rudi Gruber** was about to take off over the Atlantic on TWA, he wrote of a most stimulating meeting of the Corporation Visiting Committee for the Department of Modern Languages—he is one of the three Alumni Representatives. He says: "M.I.T. Chairman James Killian attended the meeting (also Dean Jerome Wiesner) and addressed the group at an A. P. Sloan-room luncheon, which was honored by the presence of our President Julius Stratton. On Monday I fly to Rome for a visit to my aging brother in Naples, followed by calls at families' friends in Switzerland and Germany. Will be back toward the end of May in time to 'prepare' for our 50th Reunion."

On March 31—April 1, the USA saluted the USO (United Service Organization) in Washington in its 25th year with about 1000 persons in attendance. **Steve Brophy**, as one of the original organizers in WW II, is chairman of the 25th Anniversary Committee of USO, an activity that has served to keep his left hand out of mischief while his right hand was busy on the work of the 50th Reunion. Apparently the highlight of the evening at the anniversary dinner was when President Johnson appeared and presented Bob Hope with the USO award. The "one and ultimate purpose" of the USO is to best serve the needs of military personnel wherever they may be stationed throughout the world—in May it had a total of 12 service clubs in Vietnam, at the request of the DOD.

**R. M. Kallejian** writes from California: "After 75 years of living in this old world of ours, I am just beginning to understand Henry Wadsworth Longfellow's 'Psalm of Life.' One verse says: 'Life is short and time is fleeting, And our hearts though stout and brave, Still like muffled drums are beating funeral marches to the grave.' How true! I am still alive, and God willing I will be in Boston June 1st . . . I thank God every day of my life for the education I received at M.I.T. 50 years ago. It has kept me, my children and grandchildren as well off and better than the Joneses." . . . We are grateful to Alexandra (Allie) Jewett for a modicum of information on what **Moose (Ted) Jewett** has been doing in and about Buffalo over the past few months. They spent February and a week of March in the Hillsboro Club, Pompano Beach, Fla., a week of visiting in April in Cobham, Va., and shortly thereafter motored to Deerfield School to see a grandson. The big event in early May was when they moved from their 38 Hodge Avenue home (44 years) to Park Lane, 33 Gates Circle. As for philosophy, Allie says: "Can't give you his philosophy but guess it's 'Keep busy and cheerful.'"

Still directing activities of the American Craftsmen's Council, **Bill Barrett** has had heavy traveling since the first of the year. In January he went to Milwaukee, where he officiated at the opening of the first of a series of openings of their Craftsmen USA '66 exhibits. This was at the Milwau-

kee Art Center. Early in February, he attended a meeting of the Illinois Designer-Craftsmen group at Skokie. Later that month he presided at a meeting of the executive committee of Museum West, a branch office which he opened last year at Ghirardelli Square in San Francisco. He notes: "This office is a combined museum and service center for our members in the West Coast states. From there I went on to Seattle, where I visited with a number of our members, and went on from there to Portland, Oregon. In Portland, we had the opening for the Northwest Craftsman USA '66, at the Portland Center of Contemporary Crafts." . . . When you make bets or predictions and win, you sort of like to talk about it, even though few may wish to listen. We have one, the item we put in the March issue (written in mid-January) about whether there would be an income tax or a sales tax in New Jersey. Even though the Administration was pressing hard for an income tax and seemed to have it sewed up, one vocal hardworking group, headed by our own **Leonard Best '16**, called the "Citizens Action Committee for a Sales Tax," pressed hard for the logic of a sales tax. We predicted Leonard would win. And he did! 'Twas with what he proclaimed were very cogent reasons.

Speaking of predictions, the **Harold Millses**, predicting in advance that March and April in New Jersey would be nothing missed weather-wise, took off for about a month to places and places in Florida. We asked them to open an envelope and follow instructions when crossing a stated parallel 14 miles south of a particular spot in Florida—specifically to make a sketch of just what they saw looking West at that point. We have the return card for Reunion display, a sketch entitled "Pines, Palms, Palmettos in Profusion," that might well be used to illustrate a vacation travel book called, as they noted, "Land of Motels, Hotels, Motor Boats and Money." . . . In early May, **Lee Jones** wrote from Elma, N.Y.: "Have just come from having dinner with **Ted Jewett** to settle our plans for the Reunion. The Jewetts have sold their home in Buffalo and are moving into a very small apartment in the most desirable apartment house in town so as to have their foot in the door when a larger one becomes available (or they get to the top of the waiting list). . . . My wife and I live a very quiet uneventful life in the suburbs. Our daughter, her husband and their children came for a week at Easter so I decided to do some repainting on the second floor. Have also been repainting our station wagon, and am way behind on ground work in our raspberry patch."

Here's the story of the current activities of **Berthoud Boulton**, rich in suggestions for the younger man who is about to retire: "Somehow I seem to be as busy as before retiring. 'No rest for the wicked.' Teaching Engineering Mechanics at our Junior College keeps the old brain functioning. Then I somehow got drawn into the Poverty Program as a volunteer, endeavoring to prepare adults to pass the state high school equivalency exams. This occupies me Wednesday and Sunday afternoons. Some flexibility is required to



change from calculus of the acceleration of rigid bodies to simple arithmetic. On Tuesdays I continue for the 6th year as a Red Cross Volunteer in our Veterans Hospital. Last December I installed a wood lathe and have been enjoying turning some rather beautiful bowls in mahogany and walnut. Last fall I finished building myself a house on a lovely little lake near here (St. Louis) and this summer am looking forward to enjoying swimming, canoe sailing, archery and other simple games plus a bit of bridge and, not least, some highballs and martinis on the patio overlooking the lake. Next spring my sister and I plan to tour Europe, repeating our delightful experience of four years ago."

**Charlie Reed** reported at the end of April that he and Mil had just driven down to Houston to welcome another granddaughter. Wrote: "We'll be here two weeks more and then drive back to Bethesda, Md. We've sold our house there and will move out in the late summer when we return from Wayne, Maine."

Here are excerpts from an interesting story about **Barney Gordon** in the April 19 issue of *Women's Wear Daily*: "Manchester, N.H.—Darlene Knitwear, Inc., here, is a manufacturer of men's knitted shirts, women's sweaters and sportswear, and from all outward appearance, is similar to many other companies in the industry. But it is headed by a man who is a combination businessman-scientist, and it is this extra dimension that makes the company unique in many respects. B. C. Gordon, President of Darlene, is a chemical engineer by training and a graduate of the Massachusetts Institute of Technology. His scientific mind and bent has led him to develop a trait of character not generally found among businessmen. He is never satisfied with the state of things. He wants to constantly improve them. And this is what he has done with Darlene's products. The company is also a more or less informal M.I.T. 'club,' in that some of its top personnel are M.I.T. graduates. The firm's production chief is a mechanical engineer; its laboratory head is a chemical engineer and the computer division is supervised by a mechanical engineer. But the all more remarkable thing is that Mr. Gordon, who came here as a youngster with his mother, sisters and brothers from Lithuania, after his father had come here first, started out in the business world selling newspapers in Boston. His education and training have given him a scope beyond that of most businessmen, to whom the acquisitive process is the most important motivating force. 'My philosophy, if one could say I had one, or better still, guiding force, has been to constantly try to improve things—to make them better, and in my field, it is things for people to wear,' he said. Mr. Gordon, who is hale and vigorous, believes implicitly in giving people better wearing material, better quality, better everything. . . . Mr. Gordon put it this way: 'In integral calculus, the delta X theory states that all integrations are made by little steps called increments or little delta X's.' The direction for all developments by Darlene has come from

Mr. Gordon." The article mentions a number of far-reaching developments in manufacturing technology, including the removal of frictions in full-fashioned knitting machines, which were in the past the cause of abrupt stopping of machines, breakage of needles, and damage of materials. A new hydraulic brake developed by the company solved the problem. As noted: "Mr. Gordon is a business-scientist in the humanistic tradition. He believes it is necessary to improve our products so as to help man improve himself."

The May class luncheon at the Chemists' Club in New York, held jointly with the class of 1917, saw some seven '16ers and six '17ers. Those present included Joe Barker, Steve Brophy, Walt Binger, Harold Dodge, Ken Richmond, Herb Mendelson, and Peb Stone. Steve reported latest estimates on reunion attendance, Peb told of last-minute changes in the reunion booklet, Walt told of near-completion of his history mock-up, and Ken spoke of souvenirs. Once more, the chef's delicious rarebits and Golden Bucks headed the list of orders.

We regret to report the death of **Edward (Ed) Weissbach** on April 24. This saddened many '16ers who knew he was scheduled to be the officiating clergyman at the Memorial Service to be held in the Chapel in Cambridge on Alumni Day June 13—we had so been looking forward to seeing Ed at these services. The Boston Herald of April 25 reads: "Rev. Edward A. Weissbach, 74, Cambridge Rites Tomorrow. The Rev. Edward A. Weissbach, 74, of 19 Grafton St., Arlington, retired assistant at St. James Episcopal Church, North Cambridge, died Sunday. A native of Cincinnati, the Rev. Mr. Weissbach was a 1916 graduate of Massachusetts Institute of Technology. He was associated with the Campbell Soup Company, Camden, N.J., for many years before being ordained to the Episcopal priesthood in 1957. He was subsequently named assistant to the rector of Grace Episcopal Church in Merchantville, N.J. He was later rector of Christ Church in Somerville. He leaves his wife, Elizabeth (Bridge), and a daughter, Mrs. Harry Oberholtzer of Atlanta, Ga. Funeral services will be Tuesday at 4 p.m. in St. James Church."

We also regret to report the death of **Edgar L. (Bud) Kaula** on April 13 in Somerville. We hope to have more information later but at the moment can report that he had been living with his sister, Mrs. Clifford W. Lassen, in Somerville and had been in failing health. He is survived by two sons, William M. and David C. Don Webster reports: "Both of the sons have been fine citizens. One was a West Pointer, high in his class, and was in the Corps of Engineers—resigned from the Army some years ago. Both boys have Ph.D's, I believe, and both are college professors, one of Geophysics at U.C.L.A., and the other of English at the University of Western Ontario (formerly at Dartmouth)."

This closes the column for the current season. Many thanks to the many who have responded so generously to requests for news or a bit of philosophy, for this is what has kept the column full, and hope-

fully, interesting. Finally the best wishes of your class officers for a happy, healthful and restful summer and just the kind of vacation you have been looking forward to. Let us know where you are, wherever you are, what you are doing, whatever you're doing, and so long until November.—**Harold F. Dodge**, Secretary, 96 Briarcliff Road, Mountain Lakes, N.J.; **Ralph A. Fletcher**, President, Box 71, West Chelmsford, Mass.; **Joseph W. Barker**, Vice-president, 45 Beechmont Drive, New Rochelle, N.Y.; **Hovey T. Freeman**, Treasurer, 45 Hazard Avenue, Providence, R.I.; and **T. D'Arcy (Steve) Brophy**, 470 Park Avenue, New York, N.Y.

## '17

Au revoir, so far as class notes are concerned, until the November issue of the *Technology Review*. And don't forget, you are now entering your 50th year since graduating from M.I.T. It would be most interesting if the class notes beginning with November would contain messages from all who have sent us no word since the class history was published on the occasion of our 30th anniversary. And to supplement these letters, how about everyone writing a report of their 1966 summer and fall activities. Remember, notes for the November issue are prepared before September 10. Hide your bashfulness under a bushel, and "give a little" for the pleasure of your classmates, and as a sort of get-acquainted introduction to the crowd who will gather to celebrate our 50th reunion next June, 1967.

Let's start these notes with news from **J. R. Ramsey**, who lives in Plainfield, Ind.: "All of my business career was in the gas and electric utility field. Since retiring in 1960, I have been doing consulting work for numerous utilities in the Greater Indianapolis area. Job evaluation is my field since retiring . . . Mrs. R. and I have had three fine trips since retirement. Six weeks in the Southwest, 4½ months driving leisurely over Europe, and around the world with the University of the Seven Seas. An account of the latter trip was published in March in the Indianapolis Star and may be of interest to members of the class. The article reads as follows: "Walk together, talk together, O ye peoples of the earth; Then and only then Shall ye have peace.' And that's exactly what Mr. and Mrs. J. Raymond Ramsey of Plainfield did. The couple, home after a four-month trip around the world, has acquired a number of new friends not only from different countries but from different sections of the United States. 'Last year I read a newspaper article on the University of the Seven Seas,' says the distinguished-looking man. 'We were interested in the program that offered undergraduate and graduate college students the opportunity to study firsthand the social, economic and political problems of the countries of the world. However, we thought that, even with our interest, we wouldn't be accepted because we are quite a bit older than the average student,' the retired gentleman continues

with a laugh. The Ramseys were accepted with 18 other 'oldsters' for the World Cultural Seminar. Our ship, the M.S. Seven Seas, was equipped with the latest in library facilities, classrooms, and dormitories. . . . The floating university left New York City October 20 with 270 college students and a faculty and staff of 50. Everyone was required to take area studies, and a course on the cultural background of each country we were to visit. In addition, students took several courses equivalent to the number of credits required at a land-based university. Courses offered were in a number of fields including anthropology, economics, English, history, music, philosophy and religion, sociology and the like. Our first stop was in Lisbon, Portugal. In most of the 16 ports we were greeted by university students from that country. A reception would follow and then we would have free time to talk with the natives and sight-see. . . . We had always wanted to see Madrid, Spain, so we left the ship in Lisbon and flew to the Spanish capital. We then met the ship again in Barcelona, Spain, where the second stop was scheduled. Students, with university permission, could leave the ship on side trips. Marseilles, France, and Naples, Italy, were other high-lights of the European stops. In Rome, many of the students had an audience with Pope Paul VI. We had been to Europe several years ago and had a Papal audience so we didn't participate this time. Following stops in Pireaus, Greece and Istanbul, Turkey, the ship docked at Alexandria, Egypt. One of our younger friends, who is also a Quaker, met a young Egyptian boy who was quite bitter about Nasser. To make a long story short, she asked me to escort her ashore several times, for the only thing her Egyptian friend knew in English and 20 other languages was 'I love you'. Needless to say, when you have someone saying 'I love you' every time you turn around it is quite nerve racking. . . . The ship traveled down the Suez Canal to Port Said and Suez City before docking in Bombay, India. Perhaps our most memorable experience was spending a complete day at the Taj Mahal. Each ray of sunlight changes this dignified, serene monument. In Bombay, the Seven Seas was also greeted by a reception of more than 3,000 students and families. We were amazed at the students' conduct throughout the trip. They were well behaved and there were few problems for the authorities even though the ship was terribly crowded. Other stops were made in Port Swettenham, Malaysia; Hong Kong; Kobe, Japan, and Yokohama. Our highlights in Japan were seeing Mt. Fuji and spending a night in a Japanese inn, where we were served an American breakfast. After a short stop in Honolulu, Hawaii, we arrived in Los Angeles, February 4. The trip was just long enough. We were glad to be home again. We brought back mementoes from every country we visited."

Here's a note from **Paul Gardner** who now lives in San Patricia, New Mexico. "Since retirement as head of the William Rockhill Nelson Gallery of Art in Kansas City, I moved to a ranch where care of

lands and orchards has kept me busy until recently when I accepted the directorship of a small historical Museum in Lincoln, N. M." . . . **Alfred Ferretti** writes from Lynn, Mass.: "As you may remember, I retired in 1961 as chairman of Mechanical Engineering at Northeastern University after devoting 43 years there in furthering the advance of the cooperative engineering school idea. It was then my intention to relax completely and travel as much as I could. In the closing days of 1962, one of my former staff members, who had since become a publisher, induced me to help him out of some editorial difficulties. I expected to spend two or three months with him, but instead let him talk me into editing his publication *Electromechanical Design*. Before I realized, three years had passed. Last December I put my foot down and retired for a second time. Laura and I are now trying to get in as much travel as time will allow. We have done extensive touring by auto over the years to all parts of the U.S.A. and Canada and in 1963 had a wonderful two months in Italy and the Mediterranean. Tomorrow (April 23) we are sailing on a month's cruise thru the Canal to Peru. We have both enjoyed remarkably good health so are looking forward to a pleasant journey. Travel, photography, music (I listen—don't make any myself) and a slight interest in numismatics give me ample outlets for my time."

**Warren Tapley** is a proud grandfather as you will note by the following: "I have to blow my horn a bit; my grandson, Christopher Carlson, a senior at New Canaan H.S., Conn., is not only a national merit scholar, but has just been accepted at five colleges of his choice, including two 'ivies,' two small 'ivies,' and a smaller college in New York State. I am sure you all will understand that I had very little to do with this, but after all he is my grandson and we are very proud."

**Clarence Auty**, who resided at Melrose, Mass. died on April 23. He was 71 years old. The class 30th Anniversary history states: "From 1917 to 1922, I engaged in various engineering jobs including mechanical, electrical and hydraulic engineering. Since 1922 I have been with C. H. Tenney and Company and its successor, N. E. Power Service Company. I have followed electrical and gas projects in New England and New York. In Melrose, I have been associated with YMCA work as director and vice-president. Landscaping interests me."

The following has been received from Mrs. E. L. Gayhart, wife of Captain E. L. Gayhart, who received a masters degree in Naval Architecture from M.I.T. in 1917. "Captain Everett L. Gayhart, USN (Ret.), 74, a shipbuilder, physicist, and expert in scientific photography, died of diabetes Tuesday, November 24, 1964, at the Naval Air Station Hospital in Jacksonville, Fla. Captain Gayhart, who joined the Applied Physics Laboratory of John Hopkins University after retiring from the Navy after World War II, was an expert in flame ignition studies. He developed high-speed spark lighting techniques which enabled him to photograph flames during the first millionths of a

second of their existence. He retired in 1959. . . . High-speed photography was also a hobby of Captain Gayhart's and he took pictures of such things as the common housefly using exposures of one-hundred-thousandth of a second. . . . A native of Louisa, Ky., Captain Gayhart graduated from the Naval Academy in 1913 and studied at the Case School of Applied Science before receiving his masters degree in naval architecture from M.I.T. . . . During the late 1920's he was the director of the Navy's ship model basin at the Navy Yard in Washington, and from 1933 to 1938 he was assistant to the officer in charge of the yard. . . . During World War II he served as the assistant supervisor of shipbuilding for the Navy at the Newport News Shipbuilding and Drydock Company. After retiring, he resided in Daytona Beach, Fla."

A few random notes follow: **Ray Brooks** has been back in the hospital with a return of back trouble. . . . **Phil Crist** is back at the office after two operating trips to the hospital in recent months. . . . **Carol and Penn Brooks** headed for Austria on April 10, traveling with another couple, by car, through the Austrian Tyrol and Northern Italy for about a month. . . . **Stan Dunning** and **Ray Stevens** and their wives had fun together at Naples, Fla., during the winter. . . . **Ray Blanchard** continues to improve at his home in Melrose, Mass. and attends director's meetings at a local bank. . . . **Al Lunn** has appointed **Ray Stevens**, **Stan Dunning**, **Tubby Strout** and your Secretary as a nominating committee for Class Officers for the next five years beginning June 1967.—**W. I. McNeill**, Secretary, 107 Wood Pond Road, West Hartford, Conn. 06107; **C. Dix Proctor**, Assistant Secretary, P.O. Box 336, Lincoln Park, N. J. 07035

## '18

Memory, frail though it be, is the guardian of many treasures which can come back to grace a tender moment between old friends. It must be at least 15 years, and possibly 20, since I have seen **Harold Weber**. Returning from Boston on a late afternoon when spring was clawing its way into New Hampshire, we stopped in Mason to find Harold. Although he goes to Washington for a week every month, and to Chicago for a week every month, we were fortunate. The Webers were at home. He reminded me of an incident gone from my fragile memory long ago. While courting the precious blessing who is now his wife, he gave her a tour of the M.I.T. buildings. We met in the corridor outside my office whereupon, with more impishness than aristocratic good breeding, or so it would seem at this distance, I proffered a set of the mimeographed notes for my lectures on Preparation for Marriage. It would be presumptuous in the extreme to suppose that those notes were of value to Harold. They did expand into a 451 page book, published in 1948, still reprinted almost annually, and parts of which have been



translated into 11 foreign languages, including the Japanese. The Webbers and the Magouns had a good laugh anyway. Colleges do the strangest things, and go to almost unimaginable extremes. When Harold realized he was teaching courses which, when added to a thesis, led to a Ph.D. in Chemical Engineering, it seemed reasonable to suppose that if he wrote a satisfactory doctor's thesis he should be given an M.I.T. graduate degree. "Over my dead body," declared Harry Goodwin, then dean of the graduate school. So Harold went to Germany for his doctorate. At the other extreme, a little college has just made Pop Allen a Doctor of Civil Law. Pop was on the maintenance crew at M.I.T., retired, got elected to the New Hampshire legislature and, as was his duty because the college located in his district, helped it to obtain a charter. Result: Dr. Allen!

The May 6 copy of *Time* has a cover article on the outstanding teachers in the U.S. Quite correctly it maintains that the good ones are interested in both research and students. With equal reason it maintains that many faculties have some members whose real attitude is, "A college would be a wonderful place to work if it weren't for the damn students." Such men only want to do research. The article does not contain an adequate definition of a good teacher. Mine would be, the good teacher unites his two loves—his students and his subject—and does it with competent enthusiasm. Leave out any one of those five requirements—loves, students, subject, competence, enthusiasm—and quality is gone from the classroom. For example, there can be enthusiasm without competence. At the end of my last class this spring many students gathered around. While my face was turned some girl stole a kiss. Remnants of the old impishness unleashed on Harold Weber, still remained. During the final exam I wrote on the blackboard, "Will the lovely young lady who stole a kiss last Friday please put it back after the exam is over." She gave me a pleasant memory. Hopefully, I gave her one, however fragile.

**Harry LeVine** is one of those alumni who rejoice a class secretary's heart. He remembers to send in his news without first requiring a dunning letter. "I read with interest the doings of our classmates. There comes a time, though, for each of us to report his own doings. This is the time for me. My wife and I have been walking on air for a week. We have just heard that our oldest grandson has been admitted to M.I.T. Though only 16 years old, he graduates from high school in June with high honors. Neil Colvin will be the third generation of our family to study at the Institute, which ought to be some sort of record. Our son, Burton, obtained his master's there in 1947, and is now on the research staff of the largest manufacturer of Radar in the world, specializing in guidance and control. Our nephew, Harry Bloom, was awarded his doctorate at the ripe old age of 22. He is now the director of medical research with the largest manufacturer of 'wonder drugs' and in this capacity travels all over the world delivering papers on this subject. Oscar Horowitz, M.I.T. '22, of Bos-

ton, has made an international reputation in the amateur film photography field. He has won 83 awards in national and international competition, including citation for one of the five best films of 1965. Recently, as a visitor here, he brought a film he made called 'The Social Beaver' depicting social life at M.I.T. Since we did not have an opportunity to set up a regular meeting of the M.I.T. Club, I arranged to show the film in the long living room of my apartment. The members of the Educational Council, and the officers of the club were invited, which was all we had space for. We enjoyed a pleasant evening viewing this film, which was produced at the request of the Admissions Department. There is an old adage which says, 'If you go to a meeting and open up your big mouth, you will be put on a committee.' When I came here I went to a meeting of the M.I.T. Club of Southern Florida and opened my big mouth. I wound up being vice-president and have enjoyed serving. I was also honored recently by Dr. Stratton appointing me a member of The Educational Council. This is a stimulating, gratifying activity, and I hope to be able to do justice to the challenge. Please remember us to all our classmates, especially those who show up at Alumni Day."

No matter how many treasures memory may guard, there always comes a day when their final sum has been reached forever. By the slow processes which are sometimes required, the news of **James Havery, Jr.**'s death on December 13, 1965 has reached us from Atlanta, Ga. And how coincidental that the letter **Earl Collins** wrote was published in the April Review only a few days before he died on the 8th. He is survived by his wife Marime, a son Theodore, a daughter Sally, and seven grandchildren. I hope he was able to see himself in print that last time and to remember many old and happy, far-off things.—**F. Alexander Magoun**, Secretary, Jaffrey, N. H.

## '19

The Class of 1919 held a dinner meeting on April 28 for members residing in New York City and vicinity. They met at the Roger Smith Hotel, and had a private room through the courtesy of Buzz deLima. Those who attended had lots of fun: Marshall Balfour, Buzz deLima, Doc Flynn, Leo Kelley, Izzy Paterson, Jim Strobbridge, Don Way, and Gene Smoley. Much discussion of the 50th Reunion was in the air. . . . **Don Way** is enjoying his retirement in Westfield, N.J. He has two children in college now and one in high school. . . . **Leo Kelley** still experts on patent cases and will continue. Some of his accounts of important cases were most entertaining. . . . **Edward Flynn** still holds forth at the N.J. Zinc Company. He is trying to get a gang of '19 men to go back to M.I.T. in June to celebrate the 50-year M.I.T. move to Cambridge in 1916. He corresponds with **George McCarten** and expects to see him in June. . . . **Buzz deLima** still occupies

himself full time with the Roger Smith Hotels and United Nations. . . . **Izzy Paterson** gave a technical talk in Germany recently in German (learned at M.I.T. in 1915-1918) with remarkably successful results. He is to be honored at a dinner on May 14 as the "Man of the Year" for Eastchester. He has been president of the school board and active in civic affairs.

The following are excerpts from the Bronxville and Eastchester papers of April 28, 1966: "Mr. Paterson married the former Ethelind Munroe of Melrose, Mass. They have two sons, both graduates of the Eastchester schools. Donald graduated from Williams College and has a Master's Degree in music from the University of Michigan. He teaches music on the staff of Cornell University. Alan graduated from Princeton University and is a sales administrator with the Crane Plastics, Inc., of Columbus, Ohio. . . . Mr. Paterson was director of the Quality Assurance, Bell Telephone Laboratories, from which he retired on January 1, 1964, after more than 43 years of service. . . . In 1961, he was awarded the Braumbaugh Award for a paper published in Industrial Quality Control. He is now secretary to the International Electro-Technical Commission on Reliability. This is made up from 40 different countries. The first meeting was held last October in Japan. Mr. Paterson will present a paper on inspection at the American Society for Quality Control Conference in New York City in June.

"Mr. Paterson has been very active in community service work in the Town of Eastchester. He was a member and president of the Board of Education in Eastchester during its greatest expansion years. He served for 21 years. He was a member of the Board of Governors of the Lawrence Hospital in Bronxville. He received the Red Feather Award in 1952 for his work as special gifts solicitor and director of the Community Fund. He is a trustee of the Union Congregational Church in Tuckahoe, and also of the Eastchester Historical Society.

**Albert Reynolds** has just left for a six-weeks trip to Rome, points north in Italy, Vienna, Salzburg and part of Switzerland. . . . **John Meader** is in Europe for six weeks. He is retired but keeps an office in New York City, where he is an investment counsellor. . . . **Russell Palmer** says that things are going along fine. His mother died last year at the age of 94. . . . **Tom Goodwin** is enjoying retirement. He takes short trips around the country. . . . **Otto Muller** says he toured Florida visiting many retired friends and has now decided not to retire! . . . **Paul Blye** spends March at Sanibel Island, Fla., and last summer toured the National Parks in Wyoming and Utah. While passing thru Georgia, he talked to **Charlie Herrick** on the phone. Charlie is in good health and retired in 1962 as district manager of Georgia Power Company in Albany, Ga. . . . **Edward Richardson** writes that his principal occupations are reading and writing. He hopes to rewrite and publish two papers on geology, one dealing with orogeny and the other continental drift. He made a brief appearance



on television on the Westinghouse Company program. . . . **Marshall Balfour** has retired as a "gentleman farmer" to Kent, Conn. However, he still travels as an occasional consultant for the Population Council. This has included two trips to Bangkok this year. In June three grandchildren will visit the Balfours while their parents tour in Greece.

**Jim Strobridge** writes: "As you know since I retired I have been doing volunteer work at two museums: The Museum of the City of New York and the Historical Society. At the City Museum I work in the Theatrical Department and have been building up our circus and burlesque collections. We have good circus material but our burlesque section is weak. So I thought that those who remember the Old Howard in Boston might have some material they would donate. I'm interested in two periods—that from about 1870 to 1895 when Lydia Thompson and Pauline Markham were the leading lights. And then the era of 1895 to 1925 or 30—Dave Marion as "Snuffy the Cabman" and the Watsons—"Sliding Billy Watson" and "Billy Watson's Beef Trust," and others. I am not interested in the present "strip tease" stuff. But if anyone has the other material—programs, songs, pictures, or clippings they would be most welcome. At the Historical Society I work in the Map and Print Section. If anyone has World War I or II, Korea or the present fight maps, I would like to have them. Anything that the M.I.T.ers have on either of these two subjects would be most welcome, just send it to my home address, 439 East 51st Street, New York, N.Y. 10022.

We regret to report the death of **John E. Cassidy** on August 22, 1965.—**Eugene R. Smoley**, Secretary, 30 School Lane, Scarsdale, N.Y.

## '20

It is with a heavy heart that I must report the death of our beloved classmate **Bill Meissner**, whose retirement to Sarasota had been mentioned in these notes recently. Bill had been in precarious health for some years but we had all hoped the move to Florida would help. He maintained the cheerful and warmly friendly spirit that endeared him to all who knew him. Bill had had a long and successful career as an architect in New York and later in the Philadelphia area. He was long a regional governor of his fraternity. He leaves his wife, Isabel, who will remain at 940 Calousa Dr., Sarasota. I am indebted to "Peso" Moody of the Class of '17 and to our classmate, **John Nalle**, for writing me the news of Bill's untimely death. Squire Nalle is of Charlottesville, Va., address 1825 Wayside Place. It must be like going back home to him, as he went to University of Virginia before coming to M.I.T.

**Jim Wolfson** recently served as moderator at a panel discussion on the role of the engineer and the architect in shaping New York, held jointly by the N.Y. chapters of the N.Y. State Society of Profes-

sional Engineers and the American Institute of Architects. Jim, who is senior vice-president of Tishman Construction Company, is a member of the Chapter Activities Committee of the Professional Engineers Society. He has been a leader in the contracting industry for the past 40 years and has guided the development of major projects in housing and construction in over 16 states.

A cheerful note from **Bud Cofren**, relayed to me from **Norrie Abbott**, indicates that Bud and the relatively new Mrs. Cofren have been enjoying the active winter social season in and around their home in Winter Haven, Fla. In addition to visits with nearby **Ed and Beth Ryer**, and **Scott and Eleanor Wells**, the Cofrens had a brief visit with our distinguished class bachelor, **Jim Parsons**, who was about to take off for Tahiti. Let us have an account of your travels, Jim. Bud also mentioned that he was looking forward to a visit with "Scripps" Booth, '21, at Boca Raton. . . . **Art Grosscup** has moved from South Orange, N.J., to King of Prussia, Pa., address 525 Wayne Dr. . . . I trust I shall be able to report the usual good class attendance at Alumni Day and also give you a progress report on plans for the great Fiftieth Reunion and 50 Year Class Gift to the Alumni Fund. Have a good summer!—**Harold Bugbee**, 21 Everell Rd., Winchester, Mass. 01890

## '21

Wasn't that a swell 45th Reunion? Didn't we have a good time at Alumni Day 1966? Two superb events, both most enjoyable,—and all too short,—which won't be forgotten for a long time to come. To all of the Class of '21 and at M.I.T. who had an active part in arranging the programs and other items for our pleasure and convenience go the sincere thanks of everyone who participated in the five memorable days. We hope that you and your wife, dear classmate, were among those present and, therefore, know all that took place at the Griswold Hotel and Country Club in Groton, Conn., and on the M.I.T. campus. If you weren't able to attend, the details will appear in the next issue of the Review in November, since our publication schedule does not permit their inclusion this month. Of course, you won't forget to renew your annual membership in the Amity Fund as the sole means for continuing your subscription to the Review—to get the November and succeeding issues. Now that our 45th Reunion is but a happy memory, work has already started on major portions of the observance of our golden anniversary in 1971, for which several meetings of your Class officers have already taken place. You'll hear more about it in these columns from time to time.

**Dr. Augustus B. Kinzel**, President of the National Academy of Engineering, has unveiled the organization's newly-adopted seal, a stylized silhouette of a Roman viaduct. Gus announced that the emblem is intended to symbolize engi-

neering "as a bridge between science and society and between the acquisition of new knowledge and its transformation into new products and services to mankind." He added: "Because engineering is a constantly changing art, we chose to have it symbolized by a timeless, simple design. It represents, as well, an important historical achievement of the engineering profession." . . . On display in a huge glass case in the lounge of the New York Yacht Club is a gorgeous scale model of the yacht "Undine," built by **Irving D. Jakobson** at his Jakobson Shipyard, Inc., Oyster Bay, N.Y. 11771. The yacht is frequently entered in long distance races, is usually the winner and has never failed to place in the top three. . . . A recent visitor to your Secretary's home in Brielle, N.J., was **William H. McTigue, Jr.**, '54, Executive Secretary of the M.I.T. Educational Council. We had a delightful day devoted to the regional activities of the Council and the M.I.T. Club of Northern New Jersey in the Monmouth and Ocean County areas of the state. . . . Also welcomed at Brielle was **John W. Cannon**, '24, of the Continental Electric Company, Newark, who is a past vice-president for programs and the newly-elected senior vice-president of the M.I.T. Club of Northern New Jersey. . . . **Col. William C. Ready** retired from the U.S. Army Corps of Engineers and spent a couple of years as resident engineer in Tripoli, Libya, for a New York construction firm. He and Martha, a former major, Army Nurse Corps, make their retirement home at 1904 Flora Rd., Clearwater, Fla. 33515. . . . **Robert W. Haskel** is director of engineering, Standard Chemicals, Inc., Natick, Mass., of which he is part owner and a director. Bob says he is too busy to retire and just can't stop work. He writes that he and Doris go tenting (he underlines "tenting") on Cape Cod every summer at Campers Haven, Old Wharf Road, Dennisport, where they have a private beach. Their daughter, Roberta, is married to David Crocker, M.I.T. '58, and has three children. Son Donald was graduated from Boston University in 1965 and is with St. Regis Paper in Newton Upper Falls. The Haskels live at 51 Marked Tree Rd., Needham, Mass. 02197. . . . **Horace B. Tuttle** heads the Insulation Contract Division, Johnson Asbestos Corporation, West Springfield, Mass. Tut is a past president of the M.I.T. Club of Hartford and also of the Hartford Numismatic Society. He is active as a Shriner and past secretary of Kiwanis and says he plays tennis regularly when he isn't working at his coin collection. He and Pearl make their home on Park Ave., Bloomfield, Conn. 06002. Their family comprises four married children: son George, University of Connecticut; Gladys, who attended a school of nursing; Nancy, graduate of a school for models; Bell, University of Connecticut; and 13 grandchildren. . . . **Richard P. Windisch** lives at 49 Butler Rd., Scarsdale, N.Y. He is a partner and financial analyst of W. E. Burnet and Company, New York City. Dick maintains membership in the American Chemical Society and the New York Society of Financial Analysts. An avid golfer, he

usually plays at the Scarsdale Golf Club and the Gull Lake Country Club. He and Margaret have three sons and one grandson. Charles, who is married, was graduated from Columbia; Richard and John are alumni of Kalamazoo College and Harvard, respectively.

**Francis T. Hill**, 14 Ware St., Cambridge, Mass. 02138, has retired as resident manager of the Boston office of the Maryland Casualty Company after 45 years of service. Upon graduation with us in Course II, Francis became associated with the company when its Boston branch was established that year. He successively became manager of the casualty department, assistant resident manager and resident manager in 1958. He was a guest at a retirement party in Boston, at which he was honored by a large group of friends and associates. When we receive Frank's questionnaire, we'll tell you more of his retirement activities. . . . Formerly vice-president, Fred M. Rowell has been promoted to executive vice-president of the New Bedford Gas and Edison Light Company, New Bedford, Mass. 02741, a unit of the New England Gas and Electric System. Fred originally joined the utility following graduation with us in Course II and became vice-president and general manager of Plymouth County Electric Company. He was later vice-president and general manager of the Cape and Vineyard Electric Company and was transferred to the New Bedford company in 1961. Fred and Natalie receive their mail via P.O. Box 173, Osterville, Mass. 02655. They have a married son and daughter and four grandchildren. . . . A colorful post card of a guard ceremony at Buckingham Palace brings the following good tidings to Maxine and your Secretary from Betty and **Sumner Hayward**: "We're having a marvelous time in London and find it most exciting. Betty keeps on the go, to my amazement. Took bus tours to Canterbury and Salisbury Cathedrals. We've been all over London plus theater six times. We're off to Exeter tomorrow. Warm regards." . . . After much too long a silence, **John S. Cummings** sent a most welcome letter from his home at 52 Hastings Rd., Belmont, Mass. 02178. Says Jack: "After many, many years, I finally get around to writing. I retired in December, 1964, after 27 years of service with Jackson and Moreland, consulting engineers in Boston. My work there was entirely in the study and rate case field. Usually this involved going to the client, so I have moved around quite a bit—going to Germany, Puerto Rico, the west coast and Texas, among other places. As you can see from my enclosed questionnaire, I did not marry until I reached an age of superior wisdom. Pearl and I have one married son, Bruce, who was graduated from Brown in 1962. He went to O.C.S. at Newport and has just completed his three years of service in the Navy. I am sorry that I shall not see you during the Reunion activities. I know you'll be busy, but if you and Maxine could find the time, we'd be very happy to see you both or just to hear your voice on the telephone. Best wishes to you and Mac." . . . **Arthur L. Silver** gives his

home address as Beaver Hill Apt. A21, Jenkintown, Pa. 19046. He is an insurance consultant with offices at 161 S. Easton Rd., Glenside, Pa. 19038. He and Ruth have a married daughter, Patricia, an alumna of Hood College, and two grandchildren.

**Edward W. Booth** writes from his retirement home at 261 N.E. Second St., Boca Raton, Fla. 33432: "As much as I should like to be with you and the gang of '21, I am afraid I shall be among the missing at the Griswold. Florida is a long way from Connecticut and, with rising costs brought about by our 'Great Society,' it will not be possible. Please give my regards to any of the boys who may remember me. I'll be thinking of you." **Scripps** retired in 1962 as a civilian mechanical engineer with the U.S. Army and calls himself an "executive loafer." He and Helen have two daughters and a son, all married, and six grandchildren. Our best to you, **Scripps**. Please keep us posted on the Florida contingent of '21. . . . Although he had planned to be with us last month, **Colonel Victor S. Phaneuf** (Corps of Engineers, retired, and now Professor of Building Construction) wrote from his home at 3951 S.W. 4th Place, Gainesville, Fla. 32601, at the last minute, saying: "Sorry for me that I cannot make our 45th Reunion. I have to teach here at the University of Florida until June 18—missed the celebration by a week. I sent you my questionnaire, so you already know that I retired as chief construction engineer of L. P. Porter Company of Beverly, Mass., and we moved to Gainesville in September, 1958, so that I could start teaching the science of building construction in the University of Florida's Department of Architecture and Fine Arts. After 35 years in this field, they felt here that I could help prepare young men for the building construction industry. I have enjoyed the past eight years and only hope that my small contribution helped some of these young men. Our department of building construction has made big strides and we have many men in top positions in the industry. I have two more years to go and then I must retire. I do not want to be entirely inactive, so I have irons in the fire for the post retirement period. Our son, Richard, is married and we have three and a half grandchildren in Rockville, Conn. Muriel and I plan to visit them in mid-July and remain for the fourth blessed event. Please say 'Hello' to the old gang for me, Cac. We would love to have any of them drop in on us on their way either north or south—we are less than 10 miles out of the way. Best wishes to you and to all of '21." **Vic** is also a construction consultant, the secretary-treasurer of the Retired Officers Association of Gainesville, a member of the American Society of Civil Engineers and active in the Gainesville Golf and Country Club. Thanks for your letter, **Vic**, and here's to seeing you when that teaching schedule no longer interferes. . . . The purchase of the Sheraton-Columbus by the Sheraton Corporation led the "Columbus (Ohio) Dispatch" to reprint the long story of the rise to fame of **Ernest Henderson** and **Robert L. Moore**, both directors and

respectively board chairman and chairman of the executive committee of the empire which now totals more than 100 hotels in the U.S.A., Canada, the Caribbean, Mexico, South America and Israel. **Ernie**, who was the guest of honor at the Symphony Grand Ball at the Sheraton-Columbus, said the corporation now rents some 38,000 rooms to more than 12 million guests each year.

We acknowledge two fine letters from **Joseph Wenick**, one addressed from his home, 37 Cedars Rd., Caldwell, N.J. 07006, to your Secretary just before Joe and Dorothy left for overseas, and another, addressed to the M.I.T. Club of Northern New Jersey from Salzburg, Austria, enroute from Zurich and Lucerne to a stay with their younger son, Martin, the second secretary and vice consul of the American Embassy in Prague, Czechoslovakia. Learning that **Saul Silverstein** planned a stay in Prague, we had written to him some time ago, with a copy to Joe, suggesting that he contact Martin at the embassy. We now have copies of most interesting personal letters from Saul to Martin and the latter's very cordial reply. Joe's letter, written before he left, says, in part: "We have one thing in common—you and I are always eager to do something for somebody. I am happy to tell you that I received a letter from Martin an hour ago in which he says: 'Sunday the Silversteins will be here and I shall take them sightseeing in the afternoon and to dinner in the evening.' (We, too, have a lovely air mail card of the Prague town hall and Tyn Church, on which Rigi and Saul say: 'Hi! dinner tomorrow night with Martin Wenick—thanks to you. Regards.'—Cac.) Dorothy spoke to Sumner Hayward a few nights ago—he thought we might meet in London, but our schedules do not coincide. I was busy at another civic project in which I am interested. Sorry I missed the last M.I.T. Club meeting, but a library board meeting interfered. You shall hear from me from Zurich, Vienna, Prague, Amsterdam or London—somewhere on this first trip of ours abroad. Our best wishes to Maxine and your good self. We'll see you in June." Joe added a postscript to suggest that anyone bound for Prague also contact Martin. Says Joe: "He is a great host—so others tell me!" An article from the "Caldwell Progress" says, in part: "Joseph Wenick, Chairman of the board of trustees of the Caldwell Public Library, addressed the Caldwell-West Essex Kiwanis Club about plans for an area library to serve the three Caldwells, Essex Fells, Roseland and Fairfield". . . . A clipping from the Springfield, Mass., "Sunday Republican" reveals that **Saul M. Silverstein** presented the keynote address at the 16th annual management conference of the Springfield Industrial Association. Saul took as his topic "Do I Measure Up?" Amidst glowing reports of Rogers Corporation business increases for the first quarter of 1966 and advances in its securities, we have, besides the post card from Rigi and Saul, the first two issues of Saul's "Daily Doings," datelined Lisbon and Istanbul, respectively. The first one notes an "automobile accident" prior to his departure



and, sensitive as we are to such occurrences, we sincerely hope the effects were limited to the vehicle itself. By the time these words reach the printed page, you will have seen Rigi and Saul in June, this 21st foreign trip will have become history and he will be deep in plans for his 22nd journey to foreign lands this coming fall.

**John W. Barriger** continues his friendly practice of personally typing messages on colorful railroad post cards, for which Artist Howard Fogg now paints "Katy" rolling stock and scenes along the Missouri-Kansas-Texas Railroad. It was a most pleasant surprise to receive a card from John, expressing his thanks for our notes wishing him well in his new endeavors. He adds: "Elizabeth and I are looking forward to seeing you and Mac at the 45th Reunion of '21 in Groton and Cambridge." In view of the heavy burden of your new duties, John, we sincerely appreciate your coming back for the reunion events. John also favored us with a copy of the Katy's beautifully illustrated and detailed annual report, which bears ample testimony to the slow but sure success of his outstanding efforts to bring the road back to financial success. Quick highlights: John is listed as chairman of the board, chairman of the executive committee and president but, says the report: "The President of the Railroad has recognized the paramount necessity of sales efforts to the extent that he spends much time in sales activities and frequently adopts the additional title of 'Traveling Freight Agent.'" The aggregate value of new equipment ordered, totaling some \$62 million, is about 125% of the Katy's 1965 revenues and "... it is believed that this is the first instance in all railroad history in which equipment orders have exceeded a single year's gross receipts." Also reported is extensive rehabilitation of property and equipment, improved service, intensified sales effort and revitalized morale. Interestingly, a quarter of the year's freight revenues was derived from wheat, lumber, automobiles, bituminous coal, cement, sorghum grains, beer and iron or steel scrap wastes and tailings, in that order. John's new slogans are "Count on Katy" and "Katy Did!" There is a most sincere acknowledgment of the loyal and dedicated support of the entire Katy organization, the officers of the railroad brotherhoods, communities along the line and patrons of the road. We'll be interested to see the year-by-year progress under John's magic touch. ... We are forever indebted to **Ralph M. Shaw, Jr.**, for his welcome gift of several series of stamps from his recent travels for our collection. ... To **Henry B. Kane**, '24, Director of the Amity Fund, our sincere good wishes on his retirement on June 30, 1966. ... Besides your Class officers, a number of other members of '21 continue active in various endeavors of the Alumni Association of M.I.T., as evidenced by listings in the current directory. **A. Warren Norton** is a past president of the Association. **Henry R. Kurth** is our Class Representative on the Alumni Council. Representatives of local alumni clubs are: **Garvin Bawden** for Cleveland; **Josiah D. Crosby**, Bangor; **Francis B. Kittredge**, Monterrey, Mex-

ico; **Arnold C. Rood**, Indianapolis; and **Joseph Wenick**, Newark. **William J. Sherry** is a member of the Committee on Club and Regional Affairs; **Edmund G. Farrand** serves on the Committee for Courses and Classes. **Melvin R. Jenney** is a director of Technology Student Enterprises, Inc. Officers of local M.I.T. clubs include: **Charles L. Manneback**, President, M.I.T. Club of Belgium; **Wallace T. Adams**, Secretary-Treasurer, M.I.T. Club of the Miami Valley; and **Charles W. Richards**, Vice-president, M.I.T. Club of Central Pennsylvania. Honorary Secretaries and Educational Counselors of the M.I.T. Educational Council include: **Samuel E. Lunden**, California; **Raymond A. St. Laurent**, Connecticut; **Edmund G. Farrand**, Georgia; **Carole A. Clarke**, **Sumner Hayward** and **Joseph Wenick**, New Jersey; **Irving D. Jakobson**, New York; **Raymond A. Snow**, North Carolina; **Wallace T. Adams**, Ohio; **Simon W. Freese**, Texas; and **Eugene W. Rudow**, Washington.

**Edwin L. Rose**, 397 N. Lima St., Sierra Madre, Calif., is a director and president of Empire Research and Development Corporation of San Diego, Calif. He and Rosalie have a married son, Roderick, with Grumman Aircraft, and three grandchildren. ... **Alexander D. Harvey** of 133 East 64th St., New York, N.Y. 10021, retired this year as a partner in Harvey, Leith and Co., New York City. He is continuing as a consultant to small business organizations, chiefly for finance and management. He and Nancy have a son, Dereke, a married daughter, Phoebe, and three grandchildren. ... **Alexander J. LaPointe** retired in 1963 as manufacturing specialist of Ford Motor Company, Dearborn, Mich. He and Lucille make their home at 690 Hanna St., Birmingham, Mich. 48009. A personal note from Alex says: "The last time I saw you, Cac, was at an Alumni club meeting in the fall of '48 in East Orange, N.J., with the late Gus Munning '22. You have certainly done a great job for our Class over the past 45 years and I hope you will be spared for a great many more. If you ever get into the Detroit area, please contact me. It would certainly be great to see you." We'll try, Alex, next time we drive to Grand Rapids to see our daughter; meanwhile, how about you two paying us a vacation visit in Brielle? ... **A. Warren Norton** has moved his office to 324B Mt. Pleasant Ave., Mamaroneck, N.Y. 10543. He says: "Glad I don't have to commute any more to 42nd St., New York City; the savings give me more time here in a larger office." Former chairman and president of Press Wireless, Inc., New York, and manager of the Christian Science Publishing Company, Boston, Warrie is continuing his service as a Christian Science Practitioner. He and Helen have two married sons, Edward, Dartmouth, and Warren, Emerson College, and five grandchildren. ... His questionnaire was mailed from Palo Alto, Calif., but **David O. Woodbury** still gives his home address as Shore Rd., Ogunquit, Maine 03907. For a moment, we thought he and India had built a new home out west again! Dave says he is working on his 23rd book and we hope,

at this early writing, to get details or a promise of a typical Woodbury letter at the June festivities. The Woodbury family comprises five children and eight grandchildren.

With consummate grief, we must record the passing of four members of '21. On behalf of everyone in the Class, we wish to extend sincere condolence to their dear ones. ... Rear Admiral **Grover Cleveland Klein** of 123 Font Blvd., San Francisco, Calif. 94132, died on September 26, 1965. A former commandant of the Mare Island Naval Shipyard, he had retired in 1952. He was born in Georgetown, Ohio, on July 14, 1892, and attended Mt. Orab (Ohio) High School before his appointment to the U.S. Naval Academy. At Annapolis, he captained the crew and won the gold "N." Following graduation in 1916, he served as a lieutenant in naval transport and naval construction during World War I. He was then assigned to attend the Institute for further study and was graduated with us with a master's degree in Course XIII-A. He served in Navy yards and as superintendent of Naval construction in private yards in Boston, New Jersey, New York and Philadelphia. He was awarded the Legion of Merit "for exceptionally meritorious conduct" as production officer of the New York Navy Yard and a gold star in lieu of a second Legion of Merit medal for his outstanding services as industrial manager of the Mare Island Navy Yard, both awards during World War II. He had been an instructor at the Naval Academy and saw duty in the Philippines. Following the second World War, he became assistant chief of the Bureau of Ships for naval shipyards, Washington, and then chief of the Bureau. He was later stationed at Treasure Island, California, as Bureau of Ships Inspector General for the west coast and then assistant chief of the Bureau for all field activities. Following his Navy retirement, he was appointed by the Department of State as a member of the Paris staff of the Advisory Board to the North Atlantic Treaty Organization, retiring in 1956. He is survived by his wife, Lois; a daughter, Mrs. William J. Timson; a son, Grover H. Klein; and eight grandchildren. We are in receipt of a warm letter from Mrs. Klein in response to the sympathy expressed to her for the Class of '21. We wish to reciprocate her kind expressions and to thank her for considerable aid in preparing these notes.

**George William Pollock**, President and owner of the Geo. W. Pollock Co., 1709 N. Arlington Pl., Milwaukee, Wis. 53201, died on November 11, 1965. Born in Milwaukee on January 28, 1896, he prepared for the Institute at West Division High School, Milwaukee State College and Marquette University, joining us in the junior year. At Technology he was a member of Corporation XV and its senior director; the Banjo Club; leader of the Mandolin Club; the T.A.C.; the Institute Committee; and Sigma Alpha Epsilon. He was graduated with us in Course XV. He had been sales manager of the National Equipment Company and sales manager of the T. L. Smith Company in Milwaukee before forming his



own company in 1937 for the manufacture of magnesite flooring. He was active in the University Club, the Oconomowoc Country Club and the Oconomowoc Lake Club and enjoyed tennis, golf and curling. He is survived by his wife, the former Janet Lindsay of Milwaukee; a daughter, Nancy, who was graduated from Wellesley; two sons, George W. and Lindsay, both Cornell alumni; and three grandchildren.

**Harvey Fletcher Rettew** of 7805 Granville Rd., Philadelphia, Pa. 19128, died on December 29, 1965. Born in Wilmington, Del., on August 16, 1897, he prepared for Technology at Delaware College, joining us in the sophomore year. At the Institute, he was a member of the Mechanical Engineering Society; in World War I, he was a private in the S.A.T.C. at M.I.T. He was graduated with us in Course II and became the heating and ventilating engineer for the Philadelphia, Pa., board of education. At the time of his death, he had retired as chief of plant operation and maintenance for the entire Philadelphia school district. He is survived by his wife, Mrs. May Rettew.

**Winter Dean**, 8111 Camino del Oro, La Jolla, Calif. 92037, died on March 28, 1966. A native of St. Paul, Minn., he was born on August 1, 1899, and prepared at St. Paul Academy and Andover Academy. At the Institute, Wint was a member of Phi Kappa Sigma, Osiris, Beaver, Pi Delta Epsilon, Corporation XV, Field Day freshman and sophomore tug o' war teams, Technique Electoral Committee, Technique 1920 as assistant business manager, Technique 1921 as treasurer, Institute Committee, finance committee and budget committee. He was also manager of the All-Technology Smoker, undergraduate treasurer and chairman of the Point System Committee. During World War I, he was a seaman, second class and acting C.P.O., U.S.N.R.F., attached to the Armed Guard and Submarine Service at Hingham and Bumkin Island, Mass., and at Pelham Bay, N.Y. A member of a prominent St. Paul family and for many years a business and civic leader in that city, he had retired in 1957 and moved to La Jolla last fall. On graduation with us in Course XV, he had joined Nichols, Dean and Gregg in St. Paul, becoming its president. He was later president and chairman of the board of General Trading Company and all 13 of its subsidiaries. He was a director of the First Grand Avenue State Bank and served for 15 years as a director of the St. Paul Chamber of Commerce. His memberships included **Rotary**, University Club, White Bear Yacht Club, Minnesota Club, St. Paul Athletic Club and the La Jolla Beach and Tennis Club. He was a former trustee of the House of Hope Presbyterian Church and Oakland Cemetery. He is survived by his wife, the former Muriel P. Smith (M.I.T. '23); his mother, Mrs. William J. Dean, St. Paul; a daughter, Mrs. Lawrence Platt, St. Paul; four sons, Winter, Jr., and Alden of Los Angeles, William of St. Paul and Edwin of Farmington, Conn.; five sisters, Mrs. Walter Kennedy and Mrs. A. E. Floan of St. Paul, Mrs. Harold Waterworth of Haverford, Pa., Mrs. Robert Palmer of

Manchester, Vt., and Mrs. A. D. White of London, England; a brother, George, of St. Paul; and 15 grandchildren. We acknowledge a personal letter of appreciation from Mrs. Dean in response to the sympathy extended to her on behalf of the Class and wish to thank her for her help in preparing these notes.

Please join the Amity Fund now so we will see you around the friendly fireside of '21 when the November issue of *The Review* heralds the 1966-67 season of '21 activities, starting with a review of last month's celebrations. Until then, all of your Class officers and committeemen join in wishing for you and yours a most pleasant and happy summer. We'll enjoy it, too, if you will remember to drop a note to your Secretaries and keep them informed of your doings and your whereabouts. Many thanks!—**Carole A. Clarke**, Secretary, 608 Union Lane, Brielle, N.J. 08730

As Assistant Class Secretary I find my task a pleasant one to acquaint you classmates with additional honors which have been bestowed on our illustrious Secretary, **Cac Clarke**. On May 11 the M.I.T. Club of Northern New Jersey honored Cac with the following citation: "You were graduated from M.I.T. in 1921 as an electrical engineer. You held positions with Western Electric Company, Victor Talking Machine Company (now R.C.A.), the Bell Laboratories, the Dictograph Products Company and since 1938 with the International Telephone and Telegraph Company, retiring in 1964. At M.I.T. you were the editor-in-chief of "The Tech" (Vol. 40). You have been the Secretary-Treasurer of your class since graduation and you were the first class agent for your class. You took part in reorganizing the Montreal M.I.T. Club in the late twenties and served as an officer in that Club. You were a member of the steering committee that organized the M.I.T. Club of Northern New Jersey in 1935, serving on the first Board of Governors, as Secretary, Vice-president in charge of programs and as President of the Club. You have served the Club also as publicity chairman, chairman of the scholarship committee and as the Club's historian at its 20th anniversary. You are an honorary secretary of M.I.T., a former chairman of Region D of the M.I.T. Educational Council. You have served on all the major M.I.T. fund drives since 1920. You were the first recipient of the M.I.T. Bronze Beaver award of the M.I.T. Alumni Association as the outstanding Class Secretary. You have served the Boy Scouts of America in various capacities for 20 years and were awarded their Silver Beaver for distinguished service to boyhood. You are still active in the Telephone Pioneers of America and in the I.T.&T. Quarter Century Club. It is now the pleasure of the M.I.T. Club of Northern New Jersey to present to you as a token of our appreciation for all you have done for the Club, the Outstanding Alumnus Award for 1966."

But this is not all. During our 45th Reunion at the class banquet on June 11, our President, Ray St. Laurent, presented to Cac a gift from the class. Since this is being written before the fact, more about

this will appear in the next issue of the *Review*. I am sure you all rejoice with me, and join with me in extending to Cac many good wishes.—**Edwin T. Steffian**, Assistant Secretary, c/o Edwin T. Steffian and Associates, Inc., 19 Temple Place, Boston, Mass. 02111

# '22

It was a pleasure to hear that **C. Ford Blanchard**, who is one of the few M.I.T. men on the staff of the Federal Power Commission, joined with Commissioner Bagge and Alvin E. Garber '37 in welcoming a group of 45 Sloan Fellows to the Commissioner's office in Washington. The group of Fellows was sampling the work of a number of governmental organizations during their travels. Ford tells us, "The group met in one of our hearing rooms and was addressed at length by Commissioner Bagge. Later they had an opportunity to meet our new Chairman, Lee C. White; also, Commissioner Lawrence J. O'Connor and Commissioner David S. Black. I was greatly impressed with the men who made up this group of Sloan Fellows and with the depth of the interest they showed, as evidenced by the character of their questions. I was proud of the fact that they were M.I.T. Alumni. I have been present when many traveling groups have trooped to the Commission offices and listened to many of the questions put to the Commission by these groups. Among them the M.I.T. Fellows were outstanding." . . . We were delighted to have received some recent notes from **Bill Mueser** of Mueser, Rutledge, Wentworth and Johnston, Consulting Engineers located at 415 Madison Avenue, New York. . . . Also a note from **Oscar Horovitz** telling of his movies of New Zealand, Fiji and Tahiti.

**Lloyd E. Raymond** of 235 Ridge Road, Stratford was pictured in the Bridgeport Post as Research Manager of The Singer Company's central research laboratory. Lloyd has accepted a position on the laboratory director's staff acting in a consulting capacity to all departments on matters relating to materials. He is president of the Powder Metal Association and past chairman of the New Haven Chapter, American Society for Metals and the Connecticut section of the American Institute of Mining, Metallurgical and Petroleum Engineers. He is currently serving on the executive committee of the Northern New Jersey Chapter of the American Society of Tool Engineers and holds membership in the American Electrolaters Society, American Ordnance Association and Morris County Engineers Club. . . . **James L. Truslow**, Vice-president in charge of international operations for West Point Manufacturing Company, Division of West Point-Pepperell, Inc., has retired. Mr. Truslow came to West Point from Saco-Lowell Shops where he was vice-president and assistant to the President. Before that he had been an overseas representative for American Viscose Corporation. In all, he has been living and working with Europe's leading

businessmen on behalf of American corporations for about 35 years since graduation from M.I.T. in Mechanical Engineering. Partially owned companies started by West Point during the term of service of Mr. Truslow were: Divington Carpets, Ltd., and Lantor, Ltd., of England and Rosiflor of Italy. He was also active in organizing Hollantor, N.V. Netherlands, Holland; Carma, A. B. Sweden; and arranging licensee agreements with companies in France and Sweden. He and his wife reside in England a short commuting distance from his headquarters in London.

**George A. Noveck** of Trenton wants to have it known that he is a graduate of M.I.T.—not Dartmouth College. He had been given this story regarding his retirement as bridge engineer for the U.S. Bureau of Public Roads. The correction is happily acknowledged in the Trenton Evening Times. . . . **Parke Appel** has written about a short visit of big **George Dandrow** who came up from Chatham to attend Alumni Council. George is busy shuttling between Chatham and New York where he is active in his consulting business doing marketing and sales promotion. Parke and Madeline have been preparing for their European trip by getting paratyphoid shots, installing gadgets to protect the Dover house and severely dieting for the strenuous weeks ahead. . . . We are sorry to report the death of **John H. Teeter**, former director of the Damon Runyon Memorial Fund for Cancer Research. Jack became director of the Fund in 1947 and served until his illness some months ago. During World War II he served as an aide to Dr. Vannevar Bush in the Office of Scientific Research and Development. He was born in Johnstown, Pa., and educated at Penn State College before coming to M.I.T. He is survived by two daughters, Mrs. Barbara Saunders and Mrs. Shirley Daniel. Jack was always our ray of sunshine in the Tucker electrical laboratory in the 1921-22 days. We met his lovely wife, Christine McGuire, at a recent reunion. . . . We here report the death of **George R. L. Hopkins** in Greensboro, N.C. George was always interested in sports, played baseball on the Orleans High School team and won many golf club championships in the Washington area, making a hole-in-one on five different occasions. Our sympathy is extended to his widow and children and grandchildren. He was a direct descendant of Stephen Hopkins, a member of the Society of Mayflower Descendants and custodian of the Orleans Historical Society. He had been doing historical research since his retirement and was writing a history of Orleans as well as historical articles for *The Cape Codder*. . . . The sympathy of our Class is also extended to the families of **Ferris Briggs**, Middletown, N.Y.; **A. Craig Lippincott**, Bricktown, N.J.; **Bradford Smith, Jr.**, New Bedford, Mass.

A late most welcome air mail letter dated May 10 from **Francis M. Kurtz** of Delray Beach follows: "Dear Whit: Don't know whether you need any news for Class Notes or not, but here are a few tid-bits for you. Sorry you did not make Delray this past winter, but we had numerous M.I.T. visitors and had an M.I.T.

cocktail one evening, while **Harold C. Pearson '23**, a fraternity brother, was spending a week-end with us. **Harold (Toby)** lives in Toronto and was on his way to the Fiesta in Mexico City. At cocktails were **Craig and Frances Hazelet, '18**, **Gene and Fran Smoley, '19**, **Freddy and Myrtle Dillon, '22**, **Ted and Mary Riegel, '22** (our next door neighbor), **Allen and Ann King, '22**, and **Joe and Ann Harris, '27**. . . . Other than above, we enjoyed visits from **Winn and Dorothy Morse, '22**, from **San Diego, Bill and Nell Stose, '22**, **Penn Valley, Pa., Lee and Audrey Carroll, '22**, **Montclair, N.J., Don and Louise Carpenter, '22**, **Mendenhall, Pa., and Jack and Hardy Liecty, '22**, of Phoenix, Ariz. There may have been others but those are all the names I find in the Guest Book. We often forget to drag out *The Book*. So you can see they come from all over during the season, but from now on we shall only see our neighbors, the Riegels and the Dietzs.

"Plans are just about jelled for the summer. We are leaving here the middle of August by ship for L.A. then driving to La Jolla for a wedding, then up through California, Oregon and Washington, visiting various friends and National Parks, to Vancouver where we are taking another ship, both P & O steamers, back to Florida, returning here the latter part of October. Hope to see **Win Morse** in San Diego, but don't believe I will be seeing any other M.I.T'ers. Will not make the reunion in June, but am planning on our 45th next year. Hope we'll have a good turn-out. Early returns look good according to Parke's report. Don't pass us by if you get down any time—in season or out. Best to you and Dorothy! Sincerely, Frank."

The new addresses received are: **Philip M. Alden**, Swarthmore, Pa; **Osborne A. Browne**, Colrain, Mass.; **John S. Williams**, Richmond, Va; **Joseph H. Flather**, Sarasota, Fla; **Vesper A. Schlenker**, Orlando, Fla; **Col. Ray C. Burrus**, Hollandale, Fla; **Charles S. Comey**, St. Clair Shores, Mich.; **George B. Allen**, Orleans, Mass. . . . With our last gasp of editorial comment for the season, we wish all of you a healthful and happy summer. We anxiously await your slightly exaggerated stories of fishing success and minimal stories of golf scores. All next year you will be reminded continually of our Cape Cod reunion spot in June, The Wianno Club, and of the desire we have to see all of you at the most famous 45th Reunion of any M.I.T. class. Good luck to you all! —**Whitworth Ferguson**, Secretary, 333 Ellicott Street, Buffalo, N.Y. 14203; **Oscar Horovitz**, Assistant Secretary, 33 Island Street, Boston 19, Mass.

## '23

Information relative to the death in April of **Hall Kirkham**, 18301 North Park Blvd., Cleveland, Ohio, was reported in the June issue. **Allen A. Gould, '10**, has since reported, "Hall was a wonderful fellow—universally liked and always interested in local M.I.T. affairs. He had had

a bad heart attack last fall but had since then led a busy out-of-doors life, and so the sudden end was quite a shock." . . . **Harry P. Kelley**, staff consultant at the Avisun Corporation, died suddenly February 19 in Wilmington, Del. Author of numerous articles and a frequent lecturer on cost accounting and budgeting, Mr. Kelley joined Avisun in 1960 after serving as Director of Cost and Budgets with the American Viscose Corporation. He was also a graduate of Cannons Commercial College. Mr. Kelley served as consulting management engineer with McKinsey and Company, as assistant works manager with American Type Founders, Inc., and as controller of U.S. Glass Company. In 1960 he received the Hutchinson Award from the National Society for Business Budgeting for the best article on budgeting that year. He was a member of the National Association of Accountants and from 1954 to 1955 was national president of the Budget Executive Institute. Mr. Kelley resided at 1301 Gilpin Avenue, Wilmington, Del. 19806. He is survived by his wife, Helen E. and by a brother, Donald S. Kelley of Plainfield, N.J.

Cornell Hotel and Restaurant Administration Quarterly for February 1966, with regard to the annual convention in Detroit, December 27-29, 1965, of the Council on Hotel, Restaurant, and Institutional Education, announced that **Dr. Nathaniel H. Frank** reported on a Vocational Education Summer Study held in 1965 at M.I.T., where 100 leading educators and administrators addressed themselves to the problems of better vocational education. This conference was underwritten by the U.S. Department of Education and attended by several CHRIE representatives. "Enormous changes and sophistication in skills have taken place during the past few decades," Dr. Frank told CHRIE members in Detroit. "In the Stone Age man learned to put animals to work to free his muscles and later on to use machines so that he could become a thinking man. More recently computers have taken the drudgery out of things so that man can think even better." In the process, he noted, many traditional occupations have become obsolete and this will happen to more skills in the next few years. Dr. Frank then goes on to show how and why occupational and vocational education should, in the future, be part of everyone's education. . . . Hotel and Restaurant News for March 5, 1966 also announced Professor Frank as a speaker at the March 23 meeting of the Massachusetts Hotel-Motel Association held at the Fenway Commonwealth Motor Hotel in Boston. Dr. Frank reviewed various ways in which to interest young people in pursuing a career in the lodging industry and techniques available to train, and then retrain, these people. Dr. Frank heads a research group at M.I.T. which has been studying ways of reducing the numbers of high school dropouts, and other educational problems along these lines.

Your Secretary had the pleasure of making a brief contact with (**Sam**) **Percival S. Rice**, Associate Professor of Civil Engineering at Tufts University. We were both attending the Annual Seminar (A



Day in Wood), held at New England College, Henniker, N.H., on April 22, 1966, and sponsored by the ASCE and the NHSPE. . . . At a dinner meeting at the Towne Lyne Motel, Rye, N.H., on April 26, **Forrest F. Lange** was presented a Life Membership Certificate by the National Association of Naval Engineering—management group, of which he is both a past president of the Portsmouth Naval Shipyard Chapter and a past national vice-president (1952-1953). . . . The next two items of news prompt your Secretary to say that it is quite obvious that we have some unique industrial problem solvers among our classmates. Both of these complex industrial problems have been cooking for some time. Being trained problem solvers, M.I.T. men are usually found where the problem fog is heaviest. The first item is a clipping from the Lowell (Mass.) Sun of December 10, which gives some interesting news of several M.I.T. men under the title "Lowell Company Controls Truck Building Concern." It says in part: "A Lowell holding company, Corporation Investments Inc., has completed a multi-million dollar transaction that has brought it controlling interest in a Clintonville, Wis., truck manufacturing firm. In a joint announcement today, **Bertrand A. McKittrick**, Chairman of the Board and Richard N. Stone, President of Corporation Investments, and L. A. DePolis, President of the FWD Corporation of Clintonville, disclosed that a majority of the outstanding stock has been purchased by the Lowell group. The 54-year-old Wisconsin company has an all time high backlog of unfilled orders. The new board of directors of FWD will be made up almost exclusively of Lowell men. The Board will include **Bertrand A. McKittrick** of Lowell as Chairman of the Board and member of the executive committee. M.I.T. is well represented on the Board of FWD as two of its members are **Newell Foster**, '15, and **Bert's son, Robert A.**, '50. Corporation Investments, a little over a year ago, purchased control of the Locks and Canals and Boott Mills. Although the purchase of the Midwest firm has no immediate effect on the economic setup here (Lowell), it will no doubt strengthen the position of both the Boott Mills and Lock and Canals."

The second item relative to unique problem solving is an article in the May 9 U.S. News and World Report, under the title "Green Light for the Biggest Rail Merger—Meaning for Others." It says in part, "Now comes the new Penn Central to change the railroad map of the Northeast. The merger of the Pennsylvania and the New York Central, including the bankrupt New Haven, won approval of the Interstate Commerce Commission on April 27, 1966." Those interested in complex problems should read this article and note the map of the "Biggest U.S. Railroad" shown therein. Right in the middle of the problem is our classmate **Alfred E. Perlman**, President of the New York Central who, with **Stuart T. Saunders**, Chairman of the Pennsylvania Railroad, will fill the same roles in the company formed by merger of the lines.

Word has been received from the Alumni Office of the following deaths, but no

details are available at this time: **Howard B. Keppel**, 419 No. Oakhurst Dr., Beverly Hills, Calif. 90210 on July 19, 1965; **Francis H. Wyeth**, Leeds Northrup Company, 4901 Stenton Ave., Philadelphia, Pa., on October 13, 1965; **Arthur E. Nimitz**, 14 Wando Dr., Chattanooga, Tenn. on March 19, 1966. . . . The Alumni office advises of the following changes of address: **Julian E. Berla**, 1517 26th St., N.W., Washington, D.C. 20007; **C. Sumner McCann**, 1652 East Grand Ave., Escondido, Calif. 92025; **Louis A. Metz**, 2799 N.E. 15th St., Fort Lauderdale, Fla. 33311; **R. Adm. Wesley M. Hague**, USN 10817 Admirals Way, Pocomac, Md. 20850; **Mrs. Winter Dean**, 8111 Camino del Oro, La Jolla, Calif. 92037; **Robert H. Kean**, 323 Kent Rd., Charlottesville, Va. 22901; **Cornelius Sipel, Jr.**, 2316 Orrington Ave., Evanston, Ill. 60201; **U. A. Whitaker**, 460 North 25th St., Harrisburg, Pa. 17103; **William Webster**, New England Electric System, 441 Stuart St., Boston, Mass. 02116.—**Forrest F. Lange**, Secretary, 1196 Woodbury Ave., Portsmouth, N.H. 03801; **Bertrand A. McKittrick**, Assistant Secretary, 78 Fletcher St., Lowell, Mass. 01852

## '24

Last April we raised a tongue-in-cheek query as to whether or not **B. Alden Cushman** might be our first titled classmate. He's lost his chance now. One of your other classmates has made it. For many years the Honorable Justice **Arthur Tyndall** has presided over the Court of Arbitration in Wellington, New Zealand. Now his long service to his country has been fittingly recognized. He may now be addressed as Sir Arthur Tyndall. . . . Honor of another sort has come to **Martin J. Buerger**, Institute Professor at M.I.T. In Martin's laboratory much work on the structure of tourmaline has been carried out. A new species has now been named Buergerite by the Commission on New Minerals and Mineral Names of the International Mineralogical Association. This is not the first time Martin's name has been immortalized. Many years ago he made a trip north with **Donald MacMillan**. As a consequence of this association a place name has been added to a bay on the coast of Labrador, **Buerger Bay**.

Two more retirees to add to the growing list. **George Y. Anderson** had been with Bucyrus-Erie since graduation, for some time in Erie, Pa., and then in Milwaukee. George became vice-president for engineering in 1954 and a director in 1960. . . . The second is **Donald W. McCready**, a Course X graduate who has been on the University of Michigan faculty since the late '20's. He has retired to a spot with the charming name of Green Valley, Ariz. . . . **Paul Tishman**, in addition to being one of New York's foremost builders, has a notable collection of African art. On April 1 a showing of 135 pieces of sculpture from his collection was opened at the Musée de l'Homme in Paris, the first time a private art collection has ever been placed on exhibit in

this noted anthropological museum. The collection was expected to go next to the National Museum of Israel in Jerusalem. . . . Further on the subject of museums, **Frank Shaw** now finds himself somewhat in the capacity of a curator. That new Rust Craft store in Boston's Prudential Center, of which Frank is manager (it's the House of Rust Craft, by the way) has an art gallery. Opening show: a collection of original aquatints by Rouault.

The lengthy **Dunn** voyage is done. They're back home again in Plaistow, N.H.; which must seem pretty tame after some of the exotic spots they visited. The complete itinerary is too lengthy to give in detail, but a few of the high points were: the Galapagos, Bora Bora, Fijis, Easter Island, the Straits of Magellan in a snowstorm, and of course dozens of ports enroute. And at last we know the name of the ship. It had previously been a mystery. It was the Norwegian-American MS Bergensfjord, with 400 passengers and a crew of 425, and the line bills itself as providing "carefree cruises to all parts of the world." With more than one crewman per passenger it should have been fairly carefree.

Sorry to end the year with the report of another death. **Preston H. Scott** died on May 8. For many years Pres had been with Union Carbide, and later was a consultant for the Williamson Company in Fairfield, N.J. **Paul Cardinal** and **Walter Bagby** attended the funeral. Mrs. Scott requested that gifts be made to the Class of 1924 Memorial Fund in lieu of flowers. The sympathies of the class go to Mrs. Scott and the family. . . . Now summer is here. Many of you will be hopping off to foreign shores or doing any number of things that will make good copy for this column. Do keep your secretary in mind and drop him a note or card. And keep in mind also the address—**Henry B. Kane**, Secretary, Lincoln Road, Lincoln Center, Mass.

## '25

Letters and a visit from **Masaru (Kamy) Kametani** provide some matters of interest this month. In preparing for a visit to this country, Kamy wrote that he had had a call from "**Chip**" Chippendale and his wife who were just finishing a two-months trip around the world. They had come from New York to Los Angeles and had reached Tokyo via Tahiti, Fiji, New Zealand, Australia, Singapore, Bangkok, Saigon, Manila, and Hong Kong. Kamy and the Chippendales had cocktails together at the Imperial Hotel in Tokyo and then enjoyed a Sukiyaki dinner with sake at Suehiro in the Ginza area, and then went on to the "Moulin Rouge" cabaret. Kamy arrived at M.I.T. on the 11th of May, and spent part of the morning with your Secretary on the 12th. He was joined the next day by Admiral Sei Tsukada; and a tour of M.I.T. was arranged. Your Secretary was unable to join Kamy, the Admiral and their three escorts for lunch on that day, but arrangements were made so that they received M.I.T. hospitality at the Faculty Club; and **Ed Kussmaul** was



available and did the honors for the Class of 1925. Fred Lehmann, as the Alumni Association Secretary, was also on hand. As usual, it is always a pleasure to welcome Kamy back to M.I.T.

A most pleasant visit was received from **John Partin** and his wife who were making an extensive tour of the East Coast. John has just recently retired after 35 years with the Los Angeles County Engineering Department.—**F. L. Foster**, Secretary, Room E19-702, M.I.T., Cambridge, Mass. 02139

## '26

Last month your Secretary was concerned at the timing of our class notes because that issue would be out at reunion time. I'd forgotten there was a July issue so I find myself in a real dilemma on May 10 trying to tell you some "news." The week after next, we are having our final reunion committee meeting, but by the time you read this issue, the reunion will have been over a month! So even though the reunion is the biggest news of all, there is nothing I can tell you that you will not know already. Let's therefore, just dip into the folder for a few news items. The news I find is not good news. A couple of classmates who never missed a reunion will miss our 40th by just a few weeks. A note from "Seke" Taylor and another from C. H. Mohr '33 tells us that **Bruce Humphreville** suffered a fatal heart attack in his car on his way home in Hinsdale, Ill., April 15. Bruce had been with Johns-Manville Sales Corporation for over 30 years and was chemical officer on General Patton's staff during World War II. Always an active alumnus, Bruce was past president of the M.I.T. Club of Chicago. Our sincere sympathy to Mrs. Humphreville and to their son, Bruce, Jr. . . . Another loyal classmate, **Richard W. Johnson**, died March 22nd. We learned of it through a note written on the return form of our reunion questionnaire. That is the only information we have at the moment and we do not know who wrote the note. Dick was a bachelor and had been an engineer for the Massachusetts Department of Public Works until he retired about a year ago. Always very quiet, he kept in the background and very few knew that he was one of the major benefactors of our class. Until we learn more about his death and his family, we can only express our sorrow that this dedicated classmate cannot be with us at our reunion. . . . We also must tell you that a member of the family who has often been mentioned in these notes and whom many of you looked forward to meeting on your visit to Pigeon Cove, also succumbed before reunion. I refer to our St. Bernard "Heidi" who was always stretched out at my feet as I wrote the notes. "Heidi" was 10 years old and for a large dog that is a ripe old age, but we miss her. Having had four St. Bernards, it's hard to refrain from getting another, but they are powerful animals and with a fortieth reunioner on the opposite end of the leash, the sacroiliac might not take it. The dog pen will not be empty at reunion time, but the

new resident has not even been sought as we write.

We will have lots to tell in our next issue in the fall, but with all the betwixt and between of this July issue, we are simply going to say—have a wonderful summer and don't forget to send a card to the Class Secretary to tell us about it. Cheerio until then!—**George W. Smith**, E. I. DuPont de Nemours & Co., Inc., 140 Federal St., Boston, Mass.

## '27

Stop the presses!! This is real headline news!! These are the words of **Dan Metzger** as he transmitted to me a clipping from the New York Times of April 18 announcing the marriage of **Anson Rosenthal** to Miss Naomi Sherman, also of New York. Dan says he now understands why he hasn't recently seen Rosie "in his old haunts," but, as a matter of fact, there is a picture in my files of the happy couple dated 1951 when they were pictured at a party for backers of a Broadway show. So this has not been exactly a snap decision. I took the clipping to Cambridge to a meeting of the Alumni Council at which there was a guest table for nearby 1927-ers. It caused a real stir. **Ezra Stevens** said, "You can't but admire a man who takes all the necessary time to make the correct choice of a wife, even if he needs 40 years to decide." All sent congratulations. (How many life-time bachelors left in the class?)

With reference to the 1927 gathering, it was to honor our classmate, Dr. **Edgerton**, who was the speaker at the Council meeting. He showed film of his work in deep-sea photography with Jacques-Yves Cousteau, the French under-water explorer, which proved highly interesting to all. **Frank Marcucella**, **Dike Arnold**, **Joe Burley**, **Elwood Church**, **Ezra Stevens**, **Art Connell**, **Dick Hawkins**, **Bill Taggart**, and the writer made up our group. **Frank Marcucella** stood up well under the new title of Doctor. He was awarded a doctor of science degree from Franklin Pierce College at Rindge, N.H. There was word that **George Houston** will be back at his job at Northeastern University in the fall after an eye operation. There was also word that **Hall Hately** is doing a good job at industrial real estate in San Juan, Puerto Rico.

These July notes are the last until October, giving the Secretary a break in the monthly routine, but there is a lot of news with which to wind up the publishing year. **Jim Lyles**, continuing to progress, had visits lately from **Dike Arnold** and **Ray Hibbert** and their wives. Jim has put his Bronxville house on the market and is going to concentrate on living at his other home in Canaan, Conn. This 200-year-old house, by the way, is a beauty and has always been in Jim's family. Jim has big plans to do a lot to it this year. . . . **John Swift's** move to Branford, Conn., is now explained. He has been made a vice-president of Crown-Bellis Corporation. He will continue to be responsible for the technical control of compounding the company's heat treating salts. John has worked over the years for the Institute,

having been president of the Alumni groups in both Hartford and Worcester. . . . **Frank Staples** has been elected to head the New York State Grand Lodge of Masons. This comes after 36 years as a member of Masonic order. He is president of SuCrest Corporation and somehow has also fitted in having been trustee of a bank and three charitable organizations, president of his country club, and raised a big family besides. Incidentally, this news reached me from one of my regular informants, Myron Doucette, class of '25, a long-time neighbor of the Staples family in Floral Park, L.I. . . . Professor **Henry G. Houghton** has been serving on the National Citizens' Commission on International Cooperation. Their report was recently presented at a White Conference. . . . The famous 1927 lensman, **Gjon Milli**, addressed the Hawken Art Festival in Cleveland. The news account of the event says that when he found he was talking over the heads of his audience, he would pause and say "There I go, talking like an engineer again." Not a bad idea.

I had a chance for a nice long chat with **Horace Emerson** who lives nearby in Westerly. He is still the head of the best firm of surveyors in the area, but is finding time to travel abroad a bit each year. Another not-bad idea. . . . **Bob deLucia**, who has been vice-president and chief engineer of Pacific Power and Light Company, has now been elected senior vice-president and a member of the board of directors. Thanks to Art Connell for sending word of this fine promotion. . . . **Paul Caswell Woodbury**, well-known yachtsman and a past commodore of the Rockport Yacht Club, died April 20th while boating on Lake Ponchartrain in New Orleans. He and his wife were preparing to compete in the spring regatta there. "Soapy," as he was well-known in undergraduate days, came to Tech from Williston Academy, played freshman hockey (my only sporting activity), graduated in civil engineering. He founded his own boat firm in Rockport. He leaves many close M.I.T. friends in the Boston area.

**Charles S. Pope** has moved from San Francisco to P.O. Box 9392 Arlington, Va. 22209 (possibly to continue his work on the restoration of historic buildings for National Park Service, this time in the east?) . . . Looking back to July, 1951, what was happening 15 years ago? **Bob Bonnar** became a national vice-president of the American Association of Textile Chemists and Colorists; Rear Admiral Wellings became commander of amphibious training for the U.S. Atlantic Fleet; Professor **Houghton** has written a paper on "An Appraisal of Cloud Seeding as a Means of Increasing Precipitation;" questionnaires for the 25th reunion class-book are coming in at a good rate.—**Joseph S. Harris**, Secretary, Masons Island, Mystic, Conn. 06355

## '28

We have few notes for the July issue, the last of this season. To start I might say your Secretary will leave on May 10

for a fast, three-week trip through several cities of Europe, namely Paris, Rome, Florence, Athens, and London. For a long time it has seemed to us that businessmen and professional people should be granted sabbatical leaves every seven or 10 years, following the policy of schools and universities and their treatment of teaching personnel. Will someone please get the ball rolling! . . . We note from a chart submitted by the Alumni Fund that three members of our class were recently appointed regional chairmen, as follows: **Newton S. Foster**, Nutley, N.J.; **J. A. St. Louis**, Cleveland Hts., Ohio; and **James S. Morse**, San Mateo, Calif.

Following a pattern set last month, the names of the middle third of our 40th reunion committee from H thru N follow: Mrs. Roberta L. Halligan, Roseland, N.J.; Edward Hartshorne, Stony Creek, Conn.; Thomas G. Harvey, Indianapolis, Ind.; Roger W. Haven, Wayland, Mass.; M. David Haynes, New Shrewsbury, N.J.; Mrs. Katherine S. Hazen, Belmont, Mass.; Julian W. Hill, Wilmington, Del.; Richard D. Hoak, Pittsburgh, Pa.; Walter G. Hodder, Richmond, Va.; Frank W. Horn, Centerville, Mass.; Stanley M. Humphrey, Detroit, Mich.; William Hurst, Houston, Texas; Shikao Ikehara, Tokyo, Japan; Paul A. Johnson, Honolulu, Hawaii; Arthur C. Josephs, Duluth, Minn.; M. H. Klegerman, Bronxville, N.Y.; Alfred C. Knight, Cotuit, Mass.; Ernest H. Knight, Bethel, Maine; Herman F. Krantz, Milan, Italy; Henry N. LaCroix, E. Orange, N.J.; John C. Leslie, New York, N.Y.; Edward M. Lester, York, Pa.; Frederick B. Lewis, Arlington, Mass.; Carl M. Loeb, Jr., New York, N.Y.; Gerard A. MacGillivray, Chicago, Ill.; Kenneth J. Mackenzie, Rochester, N.Y.; Mieth Maeser, Beverly, Mass.; William S. McClintic, Orlando, Fla.; Franklin McDermott, Darien, Conn.; John C. Melcher, Philadelphia, Pa.; Clark F. Merrick, Boston, Mass.; Henry Moggio, Allentown, Pa.; Carl F. Myers, Clermont, Fla.; Arthur A. Nichols, Weston, Mass.; and Walter J. Nock, Mexico City, Mexico.

A brief note from **Walter Smith**, research and development division of Arthur D. Little, Inc., invited us to a meeting of the American Society of Testing Materials to be held at Worcester Polytechnic Institute in May. Walter is a member of the New England District Council of ASTM. . . . It is our sad duty to report the death of **Joseph M. Hagerty**, Course VI, Bessemer, Ala., who passed away on February 4 of this year. . . . We also regret to report that **Robert J. O'Donnell**, Course X, of Medway, Mass., died on April 16.—**Hermon S. Swartz**, Construction Publishing Co., Inc., 27 Muzzey St., Lexington, Mass. 02173

'29

Other than information contained in the questionnaires and a sprinkling of letters or notes from classmates, the Class Secretary's best source of current news items seems to be direct from the Tech Review office which faithfully sends in newspaper clippings and address changes as they

are received. So, when a classmate does take time out to send in additional news, really it is much appreciated. **Hunter Rouse** forwarded a copy of the March-April "Steelcase Circle" in which there was an interesting article by **Gordon Carr** of J. Gordon Carr and Associates describing in detail an architect's approach to office design. The article was accompanied by a fine full-page photograph of Gordon. And, not to be outdone by Gordon, Hunter inserted a handsome photo of himself which appeared in the Iowa Alumni Review with the announcement of his becoming Dean of the College of Engineering. . . . Ken Brock also was good enough to send in further news about **Bill Baumrucker**. A column in the April 20 issue of The Tech reports that Bill, as the guest speaker at their annual banquet at the Endicott House in Dedham, presented some far-reaching ideas for the future of the press as he expounded on the subject of "The Great Free Press." This article also included a photograph of Bill as he delivered his message. Just too bad space is limited in this column for photographs, as I'm sure you'd all agree that some of our classmates still look quite handsome, even after the 35th Reunion! Thanks again, Hunter and Ken, for keeping us posted.

The Review office reports that **Lewis R. Aldrich**, associated with Aldrich and Company, Billings, Mont., in full academic regalia, represented the Institute at the inauguration of Stanley John Heywood as fourth president of Eastern Montana College on May 15. . . . Address changes include a move from Boston to New Orleans, La., for **Joseph L. Curran**, who is with the American Bureau of Shipbuilders there. . . . Also, **Richard Coveney**, formerly of New York, is now with A. D. Little in Cambridge.

Going back to the questionnaires, here's information on several classmates in Massachusetts. **Chester Erwin** is an instrumentation specialist with General Electric Company in Fitchburg and resides in Gardner. . . . **Otto Wolff** is vice-president of Engineering at the Polaroid Corporation with whom he has been associated since 1935. His hobbies include rowing, sailing, skiing, music, and experiments with musical instruments. Otto's home is in Lexington. . . . The field of dentistry has kept Dr. **Alfred D. Ross** busy since graduating from Harvard Dental School in 1932. Alfred enjoys hunting and fishing at his camp on Moosehead Lake. . . . **George Burke** is a self-employed general contractor, The Burke Corporation, in Salem, and is active in his home town of Swampscott as Chairman of the Board of Public Works and Building Committee and member of the Swampscott Transportation Committee. . . . **Chester Smith** of Lynn is now a consultant, having retired from General Electric Company in 1961, where he was employed since graduation, chiefly in research, development and design of airplane superchargers, steam turbines, and aircraft gas turbines, including jet engines. . . . **Willard Dodge** is in the District Public Works Office, U.S. Navy, in Boston, and he and his family reside in Woburn.

Congratulations to **Ed Tittmann** who received honors in February. The Journal of Metals had a fine resume of his accomplishments which we would like to quote: "Edward McL. Tittmann, member of The Metallurgical Society, has been selected to receive the 1966 Charles F. Rand Memorial Gold Medal, an AIME award which denotes outstanding service to mining administration. He serves as chairman of the board of the American Smelting and Refining Company. After graduation from M.I.T. as a mining and metallurgical engineer in 1929, Mr. Tittmann began his distinguished career at the Garfield (Utah) smelter of Asarco, rising over the years to the position of general manager of the company's Western Department in 1952. In 1955 he was elected president and chief executive officer of Southern Peru Copper Corporation (a firm that was formed partly by Asarco). Returning to New York in 1959, he became vice-president of Asarco's Smelting and Refining Department and then became chairman of the board in 1963. Mr. Tittmann also serves as a director of General Cable Corporation, Revere Copper and Brass Inc., Hecla Mining Company, and the American Mining Congress. In addition to AIME, he is a member of The Institute of Mining and Metallurgy (England). Ed's award bears the following citation: 'For distinguished achievement and inspired leadership in the administration and expansion of the mining, smelting and refining industry in the United States and abroad.' . . . Now, as summer beckons us invitingly to placid lakeshores, exotic islands, distant lands—or whatever entices you—perhaps this time of relaxation will provide a few minutes to jot down a line or two to your Class Secretary. Vacationing? Why not take your classmates along vicariously. Have a wonderful summer!—**John P. Rich**, Secretary, P.O. Box 503, Nashua, N.H.

'31

By the time these notes are published, our 35th Reunion will be history. Last minute reports from your hard-working Reunion Committee (May 10) indicate that it will be well-attended and that any who couldn't attend missed an exciting time. **Tinsley Rucker**, President and General Manager, made a hit with members and guests of the National Society of Interior Designers recently when he described the advances in furniture making (non-shrink furniture, drawers that don't stick, etc.) during a recent talk. . . . While in Riverside, Calif., I talked with **Fred Elser**. He is sorry that he won't be able to attend the Reunion and sends his best wishes to all. . . . I also had a brief but most pleasant visit in Chicago with **Randy Binner** a few weeks ago. He is in fine health and looking forward to the Reunion. . . . Sad news of the death of three of our classmates has been received since the last notes. Mrs. **Mary M. Handrahan** passed away on March 26 and **Karl H. Volkhausen** died of a heart attack on March 3. An article in the Zion's Herald reports that **E. Tyler Parkhurst** died



at his home in Newton Center on November 27, 1965. He was a registered engineer, member of the Materials Handling Society, had served as co-chairman of the American Cancer Society annual fund drives in Newton, Mass., and was treasurer of the Newton Council of Churches. Since 1950 he has been plant engineer for Carr Fastener Division, United Carr, Inc., in Cambridge. Hope you all have an enjoyable summer, and I will look forward to seeing you again in the fall.—**Edwin S. Worden**, Secretary, 35 Minute Man Hill, Westport, Conn.; **Gordon A. Speedie**, Assistant Secretary, 90 Falmouth Rd., Arlington, Mass. 02174

## '32

If you have read the reports of other classes recently you will have noted the intense reunion activities that are in progress for this year. And if you haven't realized it our 35th Reunion will take place in June 1967—next year! **Ed Nealand** called a meeting early in April of those Alumni who were available to take assignments in organizing the affair. The result of these discussions was that since our 25th Reunion back on the campus was such a success and our 30th on the Cape was so enjoyable, if we could find a location which combined these qualities we would have an enjoyable success. Also since June 1967 will mark the completion of the first year of the administration of the new M.I.T. President, Howard Johnson, and the completion of the many new buildings on the campus, there will be an added attraction to stay for the Alumni Day activities after the Class Reunion, if the location were convenient. We have found an ocean front resort atmosphere just 10 miles north of Boston at the New Ocean House, Swampscott, Mass., and have reserved the June 9-11, 1967 weekend. You will receive individual mailings with the details around the first of the year.

**Julius Brody** has written a new book entitled, "Fishery By-Products Technology" which has received favorable reviews by publications such as the "Commercial Fisheries Review" and "Quick Frozen Foods Journal." Julius is a graduate of the Food Technology Department (now Course XX) and has been with Fishery Products, Ltd., St. Johns, Newfoundland, and Dehydrating Process Company, Woburn, Mass., and is a charter member of the Institute of Food Technologists. He is now a consulting food technologist and lives at 32 Franklin Hill Avenue, Dorchester, Mass. . . . **Arthur M. Marshall** has been selected by the U. S. Chamber of Commerce to serve on a blue-ribbon panel to develop recommendations for changes in the Federal Labor Relations Act. Arthur is an attorney in Springfield, Mass., and has specialized in labor law and labor relations. . . . **James J. Robson**, Director of Tire Development for Firestone Tire and Rubber Company of Akron, Ohio, has taken an early retirement to return to the West Coast. He has been with Firestone 34 years in technical

and sales activities and will remain available for special assignments on technical projects. . . . **Dr. Manson Benedict** was elected to receive the Perkin Medal of the Society of Chemical Industry for outstanding work in applied chemistry. Manson is head of the Nuclear Engineering Department at M.I.T.

Professor **J. T. R. Nickerson** was among the featured speakers at the National Convention of the American Society of Heating, Refrigerating, and Air Conditioning Engineers in Houston in January. He discussed controlling micro-organisms through temperature and refrigeration. . . . From a press report of a seminar at which he was principal speaker we deduce that **Erwin O. Kruegel** is special assistant for research and development liaison of the Defense Supply Agency of the federal government. The seminar was designed to interest students in future careers in the textile industry. Erwin developed a practical means for scientific assessment of wool quality while a research fellow at M.I.T., and later pioneered in developing blended natural and man-made fibers. . . . Architectural applications of composite materials and reinforced plastics are being widely discussed by **Albert G. H. Dietz**, Professor of Architecture and Civil Engineering at M.I.T. One lecture was sponsored in New York by the AIA and the Construction Specifications Institute and another in Chicago at the conference of the Society of the Plastics Industry. . . . **Robert W. Baschnagel** has been appointed Chairman of the Rochester-Monroe County (New York) Area Development Council. He is with the Rochester Gas and Electric Corporation. . . . **Richard J. Marcus**, of 70 Park Street, Brookline, Mass., died February 5, 1966. He was treasurer and director of American Biltrite Rubber Company, with which he had been associated since 1932.—**E. W. Schafer**, Secretary, Room 13-2145, M.I.T., Cambridge, Mass.

## '33

The first order of business is the report on our first charter member of the Grandmothers' Club, **Mrs. W. Seymour Smith** of Nokomis, Fla. Alice Farney as a student, she was first married to Richard Wood, architect, Class of 1929; her present husband is a retired broker. Alice says that she has five grandchildren and three step-grandchildren, and I quote, "They are wonderful." For background, Alice had an A.B. from Wellesley before entering M.I.T., and she did not finish. She has received a bouquet of crimson roses, for which she thanked your correspondent. So, Alice, your classmates salute you as the first member of the Grandmothers' Club. And I thank you. . . . I had a nice reply from **Mrs. Peter Geddes**, the former Margaret Kelly, who, I already knew, is not a grandmother. She is still a registered architect on Providence, R.I., and has been working in city planning there for many years. Margaret tells me that **Polly Marshall**, formerly Polly Varney, is a grandmother, but is on a trip around the world, and probably will not get her

reply to me for inclusion in these July notes. Well, so much more for November. Margaret had a card from Polly, postmarked Katmandu, Nepal, where they had spent a day climbing up to 8000 feet in the foothills. Margaret had already taken a bachelors degree from Vassar in 1929 before entering the Institute, from which she graduated with our class. . . . Another reply was from **Muriel Bliss Wilbur**, who, though not a grandmother, has quite a story to tell. She graduated from Bates College, A.B., took a Masters in Education in B.U. and then a Ph.D. from Yale, all this in addition to her degree in Public Health from M.I.T. Her husband is a stock broker. . . . Still one more nice reply, but again without grandchildren, is from **Mrs. Archibald P. McNeil**, the former Katherine Joyce, who had a degree from Emmanuel College of Boston before entering the Institute as a student in Public Health. Katherine is still working as a social worker, and Archie is a legal investigator. In order to be forehanded for once, these notes are started on April 11 and will be mailed around May 8. So that's all for the coed part of the picture unless more evidence comes in before May 8.

Those of you who had occasion to read the June notes will have noticed that we carried a lament on **John R. Wiley** and his supposed adventures in Paraguay. I wrote to John and addressed the letter to the East 69th Street address New York City, with enough stamped postage on it to forward it to anyplace. Three or four days later comes a letter from John that asks what this is all about. John went on to remonstrate, I quote: ". . . am still at the same old stand as Director of Aviation for the Port of New York Authority, and have no knowledge of AID activities, in Asuncion or Paraguay . . . it must be a case of mistaken identity, with another John Wiley (he used no "R," though the press clip did) who is now engaged in these capers around the Tropic of Capricorn." So I had to write back a short note of apology, tempered with one reservation; I did get a letter from Wiley himself, which is way under par for that course. This press clip deal is probably familiar to most of you, though many do not realize the vast scope of clippings and clipping bureaus, and the ground they cover. In our case, M.I.T. is the magic word. An immense pile of these clips reach the Alumni Office, and they must be sorted out in class piles, after which they are sent to the secretaries. It is surprising that more mistaken identities are not found.

The Cal Mohr story has arrived. Some items are news now (April), but won't be in July. Cal mentions the nomination of **George Vila** as Term Member of the Corporation. **Ellis Littmann** is our new Estate Secretary. Golly, if I had known that this was in the wind, I would have offered him this secretary's job, and would have asked for the one that he got. Dang it, we always used to have to work to fall into these soft jobs. . . . Cal submitted a clipping from the Chicago Tribune about our own **Bill Moore**, President of American Oil Company. Bill announces that American will build facilities which will increase their crude distillation output



from 170,000 to 240,000 barrels per day, and that other projects include a 40,000 barrel per day Ultraformer which will be used to process naphthas into high octane motor fuel. . . . Cal saw Bill Moore, Bob Seyl, and Harry Summer and son at the recent M.I.T. Regional Clambake at McCormick Place in Chicago. Harry's boy is a junior in high school, and is something of an amateur actor (a Greek soldier, right now). Incidentally, Cal says that this Moore is sort of noncommunicative, and he could not extract any information. Now, if Cal can't get the story, it is just about hopeless. Cal is also worried about my not getting too much information from either Bill Reed or Bill Pleasants in San Juan. . . . I mentioned in a previous letter to Cal something about Larry deGive, Atlanta, and Cal asked if I had heard from Larry, as he knew him at school; they were both soccer players. I have not heard from Larry, Course II, for a couple of years, although I remember him well. Larry, do you see this publication? If so, let's have a few facts on deGive. It appears that Larry went elsewhere to school and did well, or so I was told by someone at the house when I phoned about 10 years ago. . . . Cal had a chance to meet Fred Lehmann at the above mentioned clambake and was quite impressed. . . . A clip says that Lynn Williams has announced his candidacy for the Democratic Committee in New Trier Township, Ill., and that Lynn was a candidate for Congress last election. New Trier appears to be the township housing Winnetka, an old favorite spot of mine. We covered Lynn's education way back last year, so will not repeat.

Now comes word from the Olavi Viitas, Course II, whose son, Paul Sears, won First Prize in a nationwide science competition, held by the Westinghouse Corporation. He will attend a five-day Science Conference in Washington, where he will compete further, for scholarships to be awarded at that time. Paul received the first Massachusetts prize for an original proof of the Mathematical Theorem, the "Isoperimetric Problem," which states that a circle contains the largest area of all plane curves with the same perimeter. Paul proved it, in a new and original way, by the use of soap bubbles. Olavi has a bright son. He sure must have married a real smart girl. How about it, Bud? I don't hear too much from you, just the boy. Paul intends to enter Harvard next fall. Olavi is an engineer with Bethlehem Steel of Quincy, Mass., and has been busily engaged in the design of those great big ships built by Bethlehem. . . . Otto Putnam, of Reading, Pa., has been chosen by the Institute to represent it at the Inauguration of Dr. Arthur L. Schultz, as President of Albright College, April 23, 1966. Otto is with Althouse Chemical. Otto, it seems, got in touch with Adam (Skee) Sysko about the Sperry Filter presses used by DuPont, at the Chambers Works Division of DuPont, where Skee is production manager. Now Skee, in turn, gave Cal some information, not about himself, but his son, who is in the Army, was on the All Army Basketball Team that won the title over all Service teams. Further, there is a possibility that the

team will go on an exhibition tour of South America and Africa. Skee is trying desperately to qualify as a coach or manager.

As I live and breathe, we have here another Grandmother Club member, the lovely Norma Van Druten Koch, of Turners Falls, Mass. Norma has, in order, an A.B. from College of the Pacific (now University), an R.N. from Stanford School of Nursing, a Masters at M.I.T. in 1933, though as she says, it should have been in 1932! Norma, you just don't know how fortunate you are. I refuse to print why! Norma's husband, Eugene, is chairman of the Board of Selectmen in Montague, Mass. She tells us that she was leaving to go to Seattle, to see her grandchildren, Tom, Bud, and Linny Hiller, whose father is Captain Hiller, teacher of Military Science, at the University of Washington. I acknowledged Norma's fine and prompt reply, and she has not yet told me where and when to send the flowers, to which she is entitled as a member of the Grandmothers Club. I do believe that Norma and I are going to get along, as she will visit a sister and brother-in-law, in Grass Valley, Calif., and, the folks are cattle people. Now, Gentlemen, and Ladies, if they can make it, you should sometime get to visit this lovely country, as I am able to remember it. Norma says, and I quote, "Do you really raise cattle and hogs?" We do, or really, did, as far as the hogs were concerned. We found, too late, that the demand for Yorkshire breeding hogs was limited, so that we were selling the little ones off as feeders, and going broke in the process. However, folks, the Angus are still active after 21 years of it (Ferd Johnson please note).

Without asking permission of our good Prexy, Ed Goodridge, I have started the ball rolling for our impending 35th Clam Bake and Chowder party. It got started this way. I met one Louis Morse, Jr., while on that South American trip; he is M.I.T. Class of 1931. Louis was all steamed up about the forthcoming Class Reunion somewhere on the Cape. He said that he has been given to understand that the class, at least those who are Reunion goers, were quite enthusiastic about the 35th, as early as the 30th, so that there has been no question of having it. A few weeks ago, I wrote a short note to the Class Secretaries of earlier classes, 29 to 32 inclusive, and to 34 and 35, also, and, in the case of those who have passed the 35th; we enquired about their experience with the 35th, and in every case, the reply was, "By all means have your 35th." One fellow mentioned that the 35th is, and should be, used as a sort of pre-requisite for the 40th, when all classes make a large Class Gift to the Institute. Two of the replies came right out with the recommendation that all classes should hold the 35th and all later reunions at the Oyster Harbors Club, eventually making this delightful setting an M.I.T. Institution for the older reunions. That, friends, has much merit. The classes, 32 and on, have not yet been heard from, and this is natural, as they find themselves in a spot of indecision, arising from too loose a contact with the proletariat. I am given to understand that, from now on, the 35th

will be a fixture, preparing for the 40th, if for nothing else. Fellows and gals, your Officers are in favor of holding a 35th reunion, and as an extra, I, personally, am enthusiastic. I like to see the old fellows come around with their young looking wives, and possibly grandchildren. It makes me feel younger, what with a full head of hair and all. The officers, Goodridge and Turner especially, will have the summer to think over how to get started lining up talent.

The more discerning will note that these notes have little or no continuity. It will not get any better, as I have been assembling the text as it comes in, whereas, ordinarily I wait until I can write the whole set at one sitting. I do have a few address changes, to wit: Russell J. Brooke, Course XV; Carl U. Burbank, from Mr. to Lt. Colonel; now, isn't that a move? Lt. Gen. Emerson L. Cummings, Course II; Robert A. Dobson IX-B. Roger E. Greenwood has moved but is still in Seattle, Course I. Our own Dr. Athelstan F. Spillhaus has not moved, but he has acquired a zip code number; Captain John H. Spiller is now Professor, has not moved, a Course XIII-A fellow; David R. Treadwell, Course X; and last, Marshall P. Wilder, Course II. Perhaps a short note on some of these fellows will help a little. I would like to know why John Spiller drops the Captain. Well, John, I know several Doctors of this and that, who prefer to be called Professor. General Cummings seems to have settled down in the Florida Keys; perhaps he wants to be warm, or he likes bone fishing.

Now comes, first, a fine, long letter from Bill Rand, the fellow who doesn't get around, or so he says. First, I have an announcement, re: Grandfathers' Club Membership. From this time henceforth, including today, there will be no new members of this exclusive Club, except when notified by the grandfather, by letter, or in person. The girls are thus tied up, also. So Bill presents three new members, and I will await their notification by the men themselves. I believe that this stipulation is of long standing, but, I have been getting lax, and have been inducting members on hearsay evidence. So, from Bill Rand: John Hayes has recently been made Air Pollution Control Coordinator for American Can Company, and is at their San Francisco plant, at 3131 Nineteenth Street. He has two grown children, who also have children, and he has one more at the College of San Mateo. Bill awards Morris Guralnick a real nice, long write up, which includes two addresses, one for business and one for his home. We do not make it a point to fill up the column with addresses, but, Bill, this is no censure, as we are glad to have new addresses both for our own card file, but also to forward to the Alumni office. Morris has really been a busy beaver. From commencement until 1946, he was with Gibbs and Cox, Naval Architects in Philadelphia, a ship building firm, and with Kaiser Shipbuilding in California. Then 20 years ago, he started Morris Guralnick Associates, and has been president ever since. The firm has grown from a one man shop to a point where they employ 200, which is phenomenal. The firm does

consulting and designing work in Naval Architecture, and Engineering, and have designed ships from 36 feet to one on which they are now working which will be 500 feet long. The firm also assists private yards, and U.S. Naval Shipyards in the development of working plans, and are one of the few companies in the U.S. who work on submarine designs. Now, so as to be able to keep both hands busy, Morris and Company have branched off into the fields of Mechanical and Electrical Engineering, and are now working on ultra high frequency transmission systems. Both of Morris' two children are married, and they have children. His son is an attorney in the Office of the City Attorney of San Francisco. It is unfortunate that I do not know Morris, but, if he will come to the 35th, mentioned above, I will make it a point to correct that. I have just noticed that I did not mention Morris' business address, 341 Market St., San Francisco. My records show 941 Market Street, Morris, so I will wait for your personal statement on the business address. Also, please include the home address, or at least the one where the Review is sent, which is official with the Alumni Office.

**Stan Ott** used to be city planner for Stockton, Calif., and is now in the same position for the City of San Mateo, and has been for eight years. He has three married daughters, and there are two grandchildren. I work it out that, at least one daughter is, at present, childless. Bill gives us an example of interesting diversification, when he shows that one of Stan's daughters is married to a Doctor of Pharmaceutical Chemistry; one to a Minister; and the third to an Aeronautical Engineer. Stan is presently engaged in a long range General Plan for San Mateo. His Professional Committees are City Planning Section of the Commonwealth Club of San Francisco, of which he is Chairman, and he is also a member of the Steering Committee of the Association of Bay Area Governments. Now, it is quite evident to me that Stan has no trouble keeping both hands busy. Another distinguished classmate. So, it comes to me that Bill Rand gives me a real shot at three top notch classmates, and I knew none of them as students. Bill, from the bottom of my heart, I thank you. You are most generous of your time in behalf of your class. You are also well known around the Alumni Office (was it not the Second Century Drive?).

Now, again, (third time this month) comes Cal Mohr. I did urge Cal to unload all he had on account of the long vacation for class secretaries coming up. So Cal has dug into the reserves and found some more: A man, wow! **Len Lindsay's** address is Hendersonville, N.C. Would that still be G. E. Cal? Cal brings up **Ivan Cliff's** passing only to mention an incident when Ivan was a Lab Assistant in the Organic Chem Lab. It seems that Ivan came back to the Lab after his Oral Exam for his Doctor's Degree, and he had to sit in a chair for over an hour because of the shakes. He passed it, as we called him Doctor long since. . . . Cal again: **Andy Regan** has just received a promotion to an executive spot with Tennessee Eastman. No mention of what actually

occurred; not a detail, and, you may be sure there were none or Cal would have had them. Also, Cal asks whatever became of the other (he hopes,) **Andrew Regan**. Cal, my card file shows two Regans, Andy, above, and **Dr. John Ward Regan**, presently of Norwich, N.Y. Our records show that he has not been heard from in years, though he is probably the Regan you had in mind, as he was a student, he did not finish, and he did take a Doctors degree elsewhere. Cal hopes, or fears, that they will build a \$375 million atom accelerator five miles east of his home in N. Aurora, Ill. It seems that they moved a big food lab out of the Chicago area into the Massachusetts area to satisfy Bobby, so they have every reason to expect this new atom accelerator in exchange. Cal allows that, with proper equipment, he will be able to watch the atoms fly by. . . . **Mal Mayer** is vacationing in Mexico (April 15) via the auto route, according to his man "Friday." In a sort of conclusion, Cal encloses and remarks on a clip from a northern newspaper (Tribune) which states that Fort Lauderdale is the fastest growing little city in the U.S., per the Government statistics. What Cal does not realize is that these figures appear on every page in every paper in this danged state, though they do not always agree on which city is in the lead. Again, Cal, my sincere thanks, and take a rest now, and send in the next batch around September 20.

Belatedly we hear of the passing of classmate **Henry M. Risley** of Seattle, Wash., on August 30, 1965. We are grateful to Mrs. Risley, his widow, for telling us about it, and we offer our sympathy. At this late date it is doubtful if we will hear any more of the details. I am writing to Mrs. Risley and will report in the November issue. Also, as Henry was a Course X fellow, I have dropped Cal Mohr a card, asking what he knows about the man. . . . Don't forget that Fort Rock Farm is only 50 miles from Boston; only six miles from the New Hampshire Turnpike, and 35 miles from Manchester and the Everett Highway, so it should be really easy to drop in around 4 p.m. for best results, but any time at all, to see the farm and the Angus cattle.—**Warren J. Henderson**, Secretary, Fort Rock Farm, P.O. Box 14, Exeter, N.H. 03833

## '34

When the news arrived I thought that our class really had made it—but only almost—our class associate **Kenneth N. Scott** has been appointed general manager of the Cadillac Division of General Motors. Kenneth left us before graduation in favor of the University of Vermont, from which he received his degree. . . . **Ralph Ranger** has been appointed product sales manager of the Special Products Group of the Lighting Products Division of **Sylvania Electric Products Inc.** at Exeter, N.H. . . . **George Fickett** has been elected Chairman of the Board of **Claude B. Schneibel Company** of Birmingham, Mich., and its affiliated firm **McDaniel Tank Company**. The **Schneibel Company**

manufactures air pollution control systems for the foundry and chemical industries. **McDaniel** produces specialized pressure vessels.—**Charles M. Parker**, Secretary, 3 William St., Norwalk, Conn. Other Secretaries: **W. Olmstead Wright**, 1003 Howard St., Wheaton, Ill.; **Kendrick H. Lippitt**, 8735 Delgany Ave., Apt. 211, Playa Del Rey, Calif. 90291; **Norman B. Krim**, 15 Fox Lane, Newton Centre, Mass. 02159

## '35

Several of our classmates have been distinguished by representing the Institute at academic events: **Bissell Alderman** at Springfield College on April 30th; **Rufus Applegarth** at the inauguration of the first President of Philadelphia College of Arts on May 2; **Gerald Rich** at the inauguration of the Chancellor of the University of California, Santa Cruz, on May 3. . . . **Carbon Dubbs** and his two sisters have endowed a professorship in Chemical Engineering at the Institute in honor of their parents. . . . **Allen Mowatt** always adds spice to these notes. His latest: "On my recent trip to Houston . . . I talked to **Donald B. Wood**, Augusta Drive, Corpus Christi and learned that he had just moved with his family into a new home at the above address on April 11. He is vice-president and general manager of the Marine Division of Reynolds Metals. He is responsible for the Caribbean Steamship Company, a wholly owned subsidiary and two other operations. He has two young daughters at home, one four years old and the other 10 years old. Two older daughters by his first marriage are secretaries—one to the Director of the Museum of Natural History in New York City and the other at the Gas Division of Continental Oil Company in Houston. Don occasionally sees John Newell at Naval Architecture Society meetings. John Newell is Art Hoskin's boss at Bath Iron Works in Maine. Don also sees another of our classmates, **Bill Bennett** from Richmond, Va. He is the assistant treasurer of Caribbean Steamship Company. Bill Bennett is a golfer and vacations at Cape Cod near a neighbor of mine."

**Ham Dow** and **Charlie Ross** are most anxious to set up a meeting of '35ers in the Philadelphia area. Such a meeting will be of enormous help in organizing future class activities.—Co-secretaries: **Hamilton Dow**, Devon-Strafford Apts. #P-550, Devon, Pa., 19333; **Irving S. Banquer**, 20 Gordon Road, Waban, Mass. 02168; Regional Secretaries: **Arthur C. Marquardt, Jr.**, 178 Mt. Vernon St., Dedham, Mass. 02026; **John H. Colby**, 118 Road "O", Nashotah, Wis., 53058; **Edward Loewenstein**, 444 Cornwallis Drive, Greensboro, N.C. 27408

## '36

As you read these notes our Thirtieth Reunion will have come and gone. The time schedule does not permit reporting



on this event until fall—so do watch for the November Review. . . . **Morril B. Spaulding, Jr.** has been appointed legal counsel for the National Business Aircraft Association. He has also moved from Woodacres, Md., to 6003 Welborn Dr., Washington, D.C. 20016. . . . **Jack Hamilton** has joined Cleveland Pneumatic Tool Company, a subsidiary of Pneumo Dynamics Corporation, as director of marketing. He was previously vice-president of sales for Menasco Manufacturing Company. . . . **Ollie Angevine** addressed the Rochester Engineering Society on the topic "The Psychology of the Perception of Noise and Sound." He is a member of the firm Olney and Anderson, consultant in acoustics. . . . **Wayne Hazen** of the Department of Physics at the University of Michigan served as a visiting lecturer at Saint Dominic College in Rockford, Ill. His subject was "The Present Status of our Knowledge of Cosmic Rays." . . . **Allied Research Associates, Inc.** of Concord (Mass.) has elected **J. B. Schliemann** a vice-president according to the caption under a picture in the Boston Herald. . . . **Robert Lutz** has moved from Scarsdale to the Convair Division of General Dynamics in San Diego and **Paul Richardson** has moved from North Granby, to Southbury, Conn., (Hurley Road RFD #2)—**Alice H. Kimball**, Secretary, 20 Everett Avenue, Winchester, Mass. 01890

## '37

**Phil Dreissigacker** writes, "I am with my original employer, Farrell Corporation, Ansonia, Conn., although I have had many transfers and interesting and challenging assignments in the past 29 years. I am presently chief engineer and busier than ever. I guess business is booming for everyone although the many problems of expanding operations and economy seem to pile up pretty high at times. We have one son a freshman at Brown and the second son a high school freshman. Ruth and I certainly expect to attend the 30th and are looking forward to it." Already 26 of our class have indicated that they expect to attend our 30th reunion, next June, at the Oyster Harbors Club on Cape Cod. In your next letter or card to your secretary, let us know if you are planning to attend our 30th.

**Phil Peters** invited a group to the last Alumni Council meeting. **Joe Heal**, **Tom Kinraide**, **John Nugent**, **Tom O'Brien**, **Bob Thorson** and **Dick Young** were able to attend and Phil presided at the council meeting. John Nugent was leaving in a few days on a trip to Ireland and Dick Young was off to Mexico City. I heard from Dick that **Wayne Pierce** and **Art Hunt** were still in business together, near-by Milford, Conn. Dick had also, previous to our meeting, written the following, "Most of us have some news, trivial or otherwise, to send to you but the problem is to take pen in hand and get with it. Your usual nice card reminded me to write now that another birthday is here. About one year from now a number of us will be finalizing arrangements for our 30th at Oyster Harbors although I guess

I'll be hopping more than the others since I've been tagged to take charge. It should be fun in a splendid atmosphere and for those who come, a continuing warm-up of friendship we and our families have been developing at the five year reunions. News of preparations has already started, so we're on our way. Marge and I have just finished a month's vacation in which we went to Portugal, Spain and some of the islands which are part of those two countries; Madeira, Man Canaria, Tenerife, and finally Maiorca in the Mediterranean. We vote for Portugal and its attachments. We would suggest it to any who like to trot around and too to those who simply want to lounge in the sun. Dick, our older son, is a busy stock broker with Clayton Securities here in Boston. He has a Beacon Hill apartment and seems to be having a ball. Steve is now finishing his first year at B.U. Law School and by odd circumstances has an apartment very close by old Sigma Nu where I lived. Pam, our blond bomb, is a freshman at Bradford Junior College. We have expected her to go to Madrid or Mexico City for her last two college years, but she has just come back from a bang-up Easter vacation trip to Kansas City, where my sister Irene and her family live, and to New Orleans where some classmates of hers live. These visits were so much fun that she now sounds as though she is testing our reaction to the possibility of taking her final two years in the U.S.; more particularly a college in Kansas (I wonder if he is a blond). So much for now. I'll store the news, if any, for June '67."—**Robert H. Thorson**, Secretary, 506 Riverside Ave., Medford, Mass. 02155; **Professor Curtis Powell**, Assistant Secretary, Room 5-325, M.I.T., Cambridge, Mass. 02142; **Jerome Salny**, Assistant Secretary, Egbert Hill, Morristown, N.J.

## '39

**Samuel P. Felix, Jr.**, XV, has been elected Vice-president of De Laval Turbine, Inc., a member of the Transamerica family. Sam continues as general manager of the Filtration Systems Division of De Laval, headquartered in Millbrae, Calif. The Division designs and manufactures systems for treatment of water, waste, and industrial liquids. The Felix family lives at 1423 Hamilton Ave., Palo Alto. . . . **Chester A. Williams, Jr.**, II, was recently appointed an assistant vice-president of The Singer Company, and chief patent and trademark counsel. He had joined Singer in 1939 as a patent attorney, and has been Chief Patent Counsel since 1962. His M.I.T. activities include being a member of the Educational Council, and an Honorary Secretary. He is also a member of the American Bar Association and the American Patent Law Association. Mr. and Mrs. Williams and their two daughters live in Flemington, N.J. . . . For those of you who wonder what **Chester L. Cooper**, XV, is currently doing, James Reston's New York Times column of February 17 gave the briefest of hints, perhaps befitting an

intelligence officer: at that time (February, that is, for things change fast sometimes in Washington) he was one of two China experts in the office of McGeorge Bundy. Reston described Cooper as "an M.I.T. graduate and former central intelligence officer, who helps Bundy with Vietnam."

From the Homestead News-Leader (Fla.), a clipping gave current news of the activities of **Irving Peskoe**, IX-A, who had just been elected secretary-treasurer of the Homestead Bar Association. Irving, who had graduated from the University of Miami Law School after receiving his B.S. in electrical engineering in '39, has lived in Dade County since 1946. He is a lieutenant colonel in the Air Force Reserve, serving active duty days in the judge advocate's office at Homestead Air Force Base. He is chairman of the Florida Bar Association's armed forces legal cooperation committee. Irving and Beatrice have three children: Riva, who recently returned from Jerusalem where she had been working on textbooks for the Israeli school system; Dan, a senior at St. John's College in Annapolis, Md.; and Anne, a student at Homestead Junior High School.

**Benjamin W. Badenoch**, XVI, has been promoted to manager of corporate development for Sperry Rand Corporation, 1290 Avenue of the Americas, New York City. Ben will be handling acquisitions and merger possibilities. His previous assignment was as vice-president and general manager of the Aerospace Division of the Vickers Division of Sperry Rand, headquartered in Detroit, Mich. Prior to his April relocation, Ben and Gay's second (and last) daughter was married, and so they chose to become Manhattan apartment dwellers instead of country folk in Troy, Mich. Their new address: Apartment 29B, 245 East 63rd Street, N.Y. 10021. . . . Have a good summer, thirty-niners, and find time to send a news item of yourself to **Oswald Stewart**, Secretary, 3395 Green Meadow Circle, Bethlehem, Pa. 18017

## '40

As most of you know, **Tom Creamer** has been appointed Class Estate Secretary. Among Tom's duties will be to assist in the arrangement of deferred gifts to the Institute. . . . **Karl Pfister** has been made Vice-president for developmental research at the Rahway Laboratories of Merck and Company. . . . **Joe Libsch**, who is director of the Materials Research Center at Lehigh University, spoke on "Induction Heating of Metals" at the March meeting of the Springfield, Mass., Chapter of the American Society for Metals. . . . **Herbert Wheeler** was the guest speaker at the State Convention of the Wisconsin Chapter of the American Institute of Architects earlier this year. The topic was "Emerging Techniques in Architectural Practice." At present, he is associate professor of Architectural Engineering at Pennsylvania State University. Previous to that he was in charge of build-



ing systems and products development at the Curtiss-Wright Corporation. He is also director and co-author of "Emerging Techniques in Architectural Practice."

**David Brown** is the new chairman of the board of Scientific Design Co. . . . Some members of our Class are still going to school. By the time these notes are published, **George Weinbrenner** will have graduated from the Advanced Management Program conducted by the Harvard University Graduate School of Business Administration. . . . **Russell DeYoung**, who is chairman of the Goodyear Tire and Rubber Company, has recently been elected as a director of the Kennecott Copper Corporation.—**Alvin Gutttag**, Secretary, Cushman, Darby and Cushman, American Security Building, Washington, D.C. 20005

## '41

**Dr. Charles H. Townes** has been named to receive the Priestley Memorial Award of Dickinson College. The award of \$1000 honors him for his "contributions to mankind through physics and his interest in educating young scientists." He is one of the inventors of the laser, the current and potential uses of which were recently discussed by him and a co-author of the first theoretical paper on lasers in 1958. This led to the creation of lasers in 1960. Since then lasers have been used to burn tiny holes through diamonds and metals; weld detached retinas in the eye without surgery; provide an extremely accurate gauge of both distance and time; bounce light off the moon like radar but with far greater resolution; transmit power and voice and television for short distances; produce truly three-dimensional photographs you can see around; give the military a successful new range finder. The laser is theoretically capable of accommodating in one beam 80,000,000 television channels and may in the future give the blind a substitute for eyes by means of a hand-held device which translates light-determined distances into sounds of varying pitch. Charles has also been made a member of the Temporary Science Advisory Committee which is made up of 13 Ph.D.s assigned the task of determining the policies, procedures and new organizational frameworks that will be needed to make future space programs effective. As you all know, he is now an honorary member of the Class of '41.

**Howard J. Samuels** spoke recently at the University of Rochester on "Government by Crisis." His talk was sponsored by the undergraduate Outside Speakers Committee of the University. Howy campaigned for the Democratic gubernatorial nomination in 1962 and reportedly may again seek the nomination this year. He is chairman of the administrative committee of the New York State Democratic Advisory Council and was chairman of Governor Harriman's business advisory committee from 1954-58. Among his activities at the national level, he serves on the Employment Service Task Force which was appointed by Secretary of La-

bor Willard Wirtz last fall, and was a member of the 1965 White House Conference on Education. In 1964 he was appointed by President Johnson to the National Citizens Committee for Community Relations. He also serves on the National Policy Committee on Pockets of Poverty of the Farmers Educational Foundation.

**Raymond W. Ketchledge** has been promoted to executive director of the Electronic Switching Division at Bell Telephone Laboratories, Holmdel, N.J. In this post he will be responsible for the development of new electronic switching systems that provide a variety of useful telephone services for both business and residential customers. The division is scheduled to move to the company's new Indian Hill Laboratory at Naperville, Ill. He has been director of the Electronic Switching Laboratory since 1959. He joined Bell Laboratories in 1942 doing military development work. He specialized in switching systems development since 1954, and has been concerned with developing memories, switching networks and logic equipment for electronic switching systems. He is a Fellow of the Institute of Electrical and Electronics Engineers and a member of the scientific honor society Sigma Xi. He has been granted 52 Patents with six pending. He lives with his wife Lois and six children Raymond, Carol Ann, Bruce, David, Richard and Robin at 15 Kemp Avenue, Rumson, N.J. . . . **Robert M. Fano** is cited in an article entitled "A Computer in the Family" appearing in the February issue of Indiana Bell News as predicting computer information service in the home to become almost like an expert member of the family. For example, applied to tax return problem, having your own computer service would be like having an expert at your elbow—a master of the tax regulations and at the same time a mathematical genius. It would unscramble the maze of rules and regulations to fit one's own specific case. It would ask the right questions and give the right instructions and warnings on the basis of the answers you give it. In other fields too, it would be a modern substitute for wise, tempered grandfatherly advice, given in a completely objective way; however, with the additional advantage of never being offended if the advice was ignored—never, never saying "I told you so" when you suffer the consequences.—**Walter J. Kreske**, Secretary, 53 State St., Boston, Mass.; **Henry Avery**, Assistant Secretary, 169 Mohawk Dr., Pittsburgh, Pa.; **Everett R. Ackerson**, Assistant Secretary, 16 Vernon St., South Braintree, Mass.

## '42

**Alan Katzenstein** sent me some information about **Harry Knox** and **John Muller**. Harry has been added to the corporate staff of Aerosol Techniques Inc. He was, most recently, director of manufacturing for USI Film Products, a division of National Distillers and Chemical Corporation. . . . **John Muller** is vice-president of Struthers Scientific and Interna-

tional Corporation. This company is involved, among other things, in a new freeze-concentration system. It has moved beyond the easily processed, low-viscosity orange juice to hard-to-freeze, high-viscosity materials such as coffee extract. In fact, the company is now certain, as a result of pilot-plant work, that it can freeze-concentrate materials having viscosities as high as 1,000-1,500 centipoise. . . . **Dick Cathcart** has started his own electrical engineering consulting business in Kalama-zoo. He was formerly with Rowen and Blair, where he was a vice-president. . . . **Bill Dennen** has an article in the recent issue of the American Mineralogist on the blackening of natural quartz by gamma irradiation.

Finally, I quote from a letter from **Adrian Marcuse**, who is vice-president of the Laboratory Institute of Fashion Merchandising. "The Institute is a college level school training young women for careers in merchandising, generally although not entirely, in the department store field. I admit this does seem a long way from engineering but I seem to have progressed steadily away from that ever since I stopped my research work on the staff at Tech. Most of my time since then has been spent more and more in sales and merchandising and less and less in technical work, and apparently the merchandising end was the area for which I was best suited. I have been at L.I.M. now just four years and have enjoyed it very much. Prior to that I had been the vice-president in charge of sales and field contracting for Corrosion Control Company, a manufacturer of various protective coatings; and before Corrosion Control I had spent quite some years with Westinghouse in Boston and New York primarily in merchandising sales and field application. For the last 11 years, my wife and I have lived in Glen Cove, Long Island with Nancy 15, Sally Ann 12 and Elizabeth 3. Nancy, of all things, is inclining towards a career in mathematics. Imagine having a Tech coed for a daughter. I have also been somewhat active in Alumni affairs: regional chairman for the fund twice, vice-chairman and solicitor once each. Additionally I am on the board of the M.I.T. Club of Long Island, and am vice-president and a board member of the Tech Club in New York, a social group with luncheon facilities at the Chemists' Club. Incidentally, any alumni in the New York area interested in joining are cordially invited as we have finally been given approval to increase our membership.—**John W. Sheetz**, Secretary, Harvard Business School, Boston, Mass. 02163

## '43

**Bedrich Hettich** has been appointed manager of operations analysis for film products of FMC Corporation's American Viscose Division. In this newly-created position, he will assist in the general administration of those activities which relate to improved efficiency of operations and, in addition, will be available for spe-

cial studies. He was formerly product manager for fibers in the division's International Operations. After graduating with B.S. and M.S. degrees in chemical engineering, and after 15 years of experience in the chemical industry, he joined the Chemical Division of FMC Corporation in 1959 where he held engineering and management positions until joining the American Viscose Division in 1963. Since then he has also served as development engineer and area manager for the Far East in International Operations. Bedrich is married, has two children and lives in Media, Pa. . . . **James F. O'Connor** of the Environmental Science Services Administration (ESSA) received a Department of Commerce Bronze Medal for superior service, the highest award a Commerce agency can give an employee. He is chief of the Forecast Branch, Extended Forecast Division, of the Weather Bureau's National Meteorological Center, Suitland, Md. The Weather Bureau is part of the Environmental Science Services Administration, which was created in July 1965 to serve as a focus for national efforts to describe, understand, and predict man's natural environment. He won the Bronze Medal for "especially valuable contributions to the technology of forecasting and related activities." He received his Master's Degree with our class. . . . **Henry F. Mixer** was recently elected Village President of Whitefish Bay, Wis. I received notice in May from the Alumni Register that **John A. Thoele** passed away in August, 1965. He lived in Brookville, Glen Head, N.Y., and many years ago was associated with **Bill Terry** in contracting and property development.—**Richard M. Feingold**, Secretary, Ritter & Berman, 266 Pearl Street, Hartford, Conn. 06103

## '44

First, I wish to express my appreciation to **Jack Barmby** for writing the class notes for April and May. On April 22 I returned from a nine week course at Wright-Patterson Air Force Base, Dayton, Ohio, entitled "Quantitative Methods in Cost Analysis." The course was largely statistics, especially regression analysis (simple and multiple, linear and curvilinear). Now that I have completed the course I seem to see references to regression analysis everywhere especially in the literature on computer programming. All of this was quite new to me although the subject clearly is not new. The term "line of regression" is from biology studies of the laws of heredity. From my "sampling" of students and alumni it appears that the subject is now taught much more widely to students of science and engineering. In addition to the course work at Wright-Patterson I taught myself Fortran computer programming and made full use of the IBM 1620 computer which was available at the school. I had previously learned basic computer programming thanks to the cooperation of **Douglas F. G. Haven**, now Associate Director of

the Alumni Fund. Doug arranged to have a duplicate set of the punch cards for the Washington area alumni sent to the Washington, D.C. Club in the spring of 1964. I am now a member of the Association for Computing Machinery and have now been given expanded duties in this area on my job.

I am very pleased to say that **Larry Dowd** has responded to my questions to him in the March notes. He writes: "Dear Paul, Thank you for the kind words, especially about the Educational Council, in the March Review. Work for the Council has been very rewarding. I recommend it to anyone that has the opportunity. Meeting these boys and girls, pleasant, intelligent, and dedicated, presents a much different picture of our youth today than the newspaper headlines do . . . To answer some of your questions—first my work. I'm just starting a new phase taking over a polyolefin customer service group in coating applications. Last week was a bit unusual but to give the picture we had nights in each of the four time zones in five days: Tuesday, Arrol, Ill. (Central); Wednesday, Chattanooga, Tenn. (Eastern); Thursday and Friday, San Francisco, Calif. (Pacific); and Saturday, Mesa, Ariz. (Mountain). With this kind of schedule life has to stay interesting." In the March notes, I asked Larry how the Midwest compared with his native Massachusetts. He replied, "Illinois and Massachusetts can't be compared. After 10 years and escape from Chicago, I learned to accept it." He continues, "My family is coming along nicely. There are five boys and four girls. We are just getting to the teen stage hence our problems so far have been little ones. My hobbies haven't changed from school days—golf and booze. P.S. Your column is very interesting." Thank you, Larry. Maybe your problems have been little ones but there have been lots of them. With seven children I thought **Dick Kulda** and his wife Mary Ellen might be at the upper limit. My statement to that effect in the March notes didn't stand for long.

**Warren H. Howard** was elected Vice-president of the Morgan Construction Company, according to the Worcester (Mass.) Gazette of February 23, 1966. Warren, who is head of the Morgoil Bearing Department, has been with the company since 1958. He started as head of the company's Pittsburgh sales office and came to his Worcester post in 1964. He lives at 10 Massachusetts Avenue. . . . We have some more information on two of our classmates who have been referred to in recent issues. In the March review we had a report on **Richard Kulda's** unofficial activities, and now we hear of his official endeavors. According to the Tustin, Calif., News of March 10, 1966, Dick decided to run for supervisor of his district (Orange County). Marketing manager for the product effectiveness division of Hughes Aircraft, Dick reported he will oppose the incumbent because the latter "does not represent the taxpayers in general." His logic will be familiar to all suburbanites throughout the country. "The incumbent was elected 12 years ago when this (county) was a farm community dotted with hamlets. Now we are one of the larg-

est and fastest-growing metropolises in the world, but we're still being run as a rural community. The incumbent tends to think this way." Kulda believes real property should be assessed on present use and is concerned that use of the Coleman vote-counting machine has set his precinct vote counting procedure, developed over a long period, "back between 200 and 300 years." A first time candidate, he is "convinced beyond the shadow of a doubt that his previous experience dealing with local government bodies and his engineering and business background have equipped him to do a good job as supervisor." We wish him well. (The Assistant Secretary sent him an article on voting machines from the Public Administration Review, March 1966). . . . **Sanborn C. Brown** (referred to in the May notes) has contributed to another article in Physics Today (January 1966). This one is of general interest to all of us, "Should Students Grade Professors?" The panel concluded that "formal criticism by their students is one good method providing it is properly conceived and executed." They also suggested "personal acquaintance with the students and classroom observation by other members of the faculty." Sanborn stated, "Providing discussion between student and teacher seems to be the most effective long-range feedback mechanism. It works very well providing a real effort at communication is established by both the teacher and student." . . . **C. L. Woodworth** sent in a note indicating he is still at Monsanto's Plastics Research Division in Springfield, Mass. He is in charge of the downstream processes development work. This includes a variety of extrusion work, including the development of foam extrusion technology. Chet sent in information on two of our classmates who participated in the A.I.Ch.E. meeting held in Philadelphia last December. **Lee Eagleton** was chairman of a morning Free Forum. From the list of Forum participants, Lee must have had a dynamic morning. The Forum provided an opportunity "for presentation and discussion of new or controversial ideas and results in chemical engineering research and development." A pamphlet relating to Graduate Studies in Chemical Engineering at the University of Pennsylvania has Lee's picture. He is an associate professor and chairman of the graduate group; S.M. and S.M. from M.I.T., D. Eng. from Yale. He teaches kinetics, ion exchange, vaporization, mixing, and optimization. Chet reports that **Dave M. Himmelblau** gave a paper involving some high-brow math entitled "A new variational approach to the Rayleigh-Taylor instability." He is a Ph.D. teaching at the University of Texas in Austin.

We have four clippings this month. The New York Times of March 31 tells of the election of **Gay V. Land, X**, as a vice-president of Southern Natural Gas Company of Birmingham, Ala. The title is vice-president for corporate planning and development. Gay, who is based in New York in his new job, has served since 1960 as a general partner in the private capital investment firm of Lambert and Company, 2 Wall Street, New York, N.Y. The Times article, which includes a picture of Gay, states that he received his



master's degree from the Wharton School of Finance and Commerce at the University of Pennsylvania. . . . In another corporate election, **Ray C. Frodey**, XX, 409 Cherokee St., Fremont, Mich., was elected as vice-president for research of Gerber Products Company. The clipping was from the Fremont Times Indicator of February 17. Ray was named to his most recent position of general manager, research and quality control in September of 1964. Congratulations, Ray and Ray. . . . **Daniel F. Lord**, X, 243 Green St., Marblehead, Mass., has joined Thorstensen Laboratory, Lowell, Mass., according to an item in The Leather Manufacturer for February. Dan is a professional Chemical/Mechanical Engineer (Mass.) with extensive experience as tannery chemist and engineer. . . . **James M. Dunford**, XIII-A, Capt., USN, Ret., is featured in a biographical article in the Pennsylvania Triangle of the University of Pennsylvania. A father of eight children, he joins the faculty of Pennsylvania's Towne School as visiting professor of mechanical engineering. He went to Pennsylvania in 1965 after 22 years with the U. S. Navy and Atomic Energy Commission, followed by four years as vice-president in charge of nuclear power plants of the New York Shipbuilding Corporation. In 1958 Jim received the Secretary of the Navy Commendation for his contribution to nuclear power. The article states that for 20 years Jim has been an avid amateur photographer who also does his own darkroom work. He takes great interest in operas, especially those of Mozart, Verdi, and Wagner. He used to build all his hi-fi listening equipment complete from circuitry to the console cabinets. His other avocations include camping and reading—typically books on the history of science or mathematics. All that and eight children? . . . We have a number of classmates who have been active this year in support of the Alumni Fund in either the Special Gifts Drive or the Regional Campaigns. The Special Gifts Drive was conducted through the end of December. **Stanley W. Warshaw** conducted a class solicitation in the Boston area while **Cortlandt F. Ames**, 3d, conducted a parallel solicitation in the New York area. Both surpassed the goals which they had set. **Thomas H. Morgan** led a special gifts solicitation for all classes in the San Antonio area while **Alan L. MacLean** performed a similar service in the Minneapolis-St. Paul area. Following completion of the Special Gifts campaign the Alumni Fund organization shifted to a regional drive in the Spring where numbers of contributors was the chief goal. The alumni office has furnished the names of the following seven regional chairmen: **Robert G. Fisher**, Wynnewood, Pa.; **Arthur Karol**, Newton, Mass.; **Edwin G. Roos**, Port Washington, N.Y.; **George W. Scott, Jr.**, Marin County, Calif.; **Page S. Ufford, Jr.**, Newark, Del.; **William M. Wallace**, The Hague, The Netherlands; **John A. White**, Dedham, Mass. To the above would have to be added the names of vice-chairmen and solicitors in order to appreciate the full effort of our classmates in support of the Alumni Fund.—**Paul M. Robinson, Jr.**,

Secretary, 7710 Jansen Dr., Springfield, Va. 22150, 703-451-8580; **Dr. John G. Barmby**, Assistant Secretary, I.I.T. Research Institute, 1200 17th St., N.W., Washington, D.C. 20036, 292-1610

## '46

By now the reunion is a pleasant memory, but as this column is being written the festivities on Cape Cod are still a month away. Hedging against the possibility that I may not be able to attend the reunion I have asked **Bill Schield**, our class vice-president, to write the report of the doings for the next issue of these notes, due out in November. I'm looking forward to reading his notes. . . . Recently **Russ Dostal** sent me a letter, with about a dozen color snapshots of our last reunion. Among the many strange exhibits shown are **Herb Hansell** in his natty Bermudas, **Bill Cahill** in a hearty guffaw, **John Green** offering all sorts of assistance to a bevy of beautiful girls, **Bill Brown** and **Jim Craig** concentrating on sevens and elevens, and **Don Hurter** in a pensive mood, trying to decide whether to buy or sell T.I. Russ writes, "My wife, Mary, promises to come to the 20th reunion. She has not attended the last two reunions, as we had a baby in May each year. This year we had the baby in February, and so she has no excuses, and promises to come. The baby born in February was our fifth boy, whom we named John Russell. We also have five girls, and I would imagine this would give us the class lead in this category, unless Cahill has been active on the coast. We moved to Cleveland in November, 1961, (18837 Palm Circle, Cleveland, Ohio 44126) after Mary and I had lived in the Detroit area all of our lives. It is strange that one meets classmates from the class of 1946 so infrequently. Except for those we see at the reunion, I have met **Bob Fried** and his wife two or three times, **Bill Rapoport** once, and **Don Sellers** once in 1946. This is all in 20 years." Russ, my experience is similar since I moved from Boston. Back east the density of classmates is reasonably high. Out here in the wide open spaces we '46ers are few and far between. Except for **Bill Cahill**, who has contacted me when in the Twin Cities, I have not met a classmate in five years.

**Jim Goldstein** also writes to say he will be at the reunion. Jim is a partner in McDowell-Goldstein Associated Architects and lives at 25 Halsted St., East Orange, N.J. He writes, "Am planning to spend next Thursday in Cambridge, as a member of the Visiting Committee for the Department of Architecture. This privilege seems to be an outgrowth of seven years of teaching at Princeton, as architect for 12 building projects for Rutgers University and Johns Hopkins University's Applied Physics Lab., etc., and my numerous years at M.I.T. Have been immersed in medical education in the last two years, as architect for Rutgers' new Medical School, and have criss-crossed the country, visiting nearly a third of the medical schools in the U.S. Professional assignments have also included projects for Bob

**Fried's** plant above Poughkeepsie, plus **W. R. Grace**, Stauffer Chemical, Ronson, National Bureau of Standards, and **West Virginia Pulp and Paper**. Community service limited so far to seven public libraries, half a dozen religious buildings, enlargement of a local hospital, etc. Rosanne collaborates with me on all of our work, acting as professional interior design consultant. Our three boys, **Roger**, 14, **Eliot**, 11, and **Raymond**, 4½, fill our house with piano drums and basketball, producing a domestic combination of Hellzapoppin and You Can't Take It With You."

**Calvin M. Newman** has been re-elected to the Young Leadership Cabinet of the United Jewish Appeal. He has served the Jewish Federation of Omaha as Chairman of Initial Gifts and as a Board member. He has been a member of the National Program Committee of the Anti-Defamation League, vice-president of the Nebraska Goodwill Industries, a Trustee of the University of Nebraska Foundation and active in the Boy's Club of Omaha. Calvin is president of a chain of supermarkets and active in numerous trade associations. He is also a director of the Omaha National Bank and Life Investors of Nebraska. . . . We have a few address changes to close out the publishing year. **Stanley Kramer** now lives at RD#5, 30 Renwick Ave., Huntington, N.Y. 11743. **Jorge M. Sanchez-Aguilar**, Lago Tercoco #112 Col. Anahuac, Mexico 17 DF, Mexico. Col. **James J. Larkin**, 8900 Camden St., Alexandria, Va. 22308. That winds up the '65-66 publishing year. My thanks to **Jim Goldstein**, **Russ Dostal**, and all the rest who have dropped me a line this year. May even more of you do the same next year. The address is **John A. Maynard**, Secretary, 25 Pheasant Lane, North Oaks, St. Paul, Minn. 55110

## '47

As a result of a very short news column in a recent issue I was flooded with news from several very sympathetic Alumni. **Dr. Robert H. Rediker** will soon be on a new position at Tech as Professor of Electrical Engineering. Bob has been actively leading a group of scientists at Lincoln Laboratory where a number of new laser phenomena were discovered. . . . **James Rial** has been named vice-president for manufacturing of the American Envelope Company, Chicago. Jim was formerly plant manager of the Rand, McNally and Company. . . . **Stephen B. King** was elected vice-president of D & R Pilot Plants, Inc. a specialized manufacturer of plastic components in Hazardville, Conn. . . . A psychoanalytic and a literary view of Shakespeare are discussed side by side by **Dr. Norman N. Holland** in a March '66 McGraw-Hill book entitled Psychoanalysis and Shakespeare. . . . **John T. Castles** has been promoted to manager of the public relations research service at the General Electric Company's corporate headquarters in New York City. In his new position he is responsible for consumer and market research and for economic research and forecasting. John has



a 19 year old daughter at Randolph Macdon Woman's College in Lynchburg, Va. . . . **Dan Sobala** has become a project engineer with Metallurgical Engineers Inc., Portland, Ore. He was previously an associate professor of mechanical engineering at the University of Massachusetts. . . . **Harold M. Brodsky** is general factory manager of the Fafnir Bearing Company, New Britain, Conn., plant. He lives with his wife and two children at 178 Barbour Rd., New Britain, Conn. . . . **Robert L. Mitchell** has been appointed vice-president technical and manufacturing of the Celanese Chemical Company. Bob has been with Celanese since receiving his M.S. in Chemical Engineering. . . . **Dr. Vincent S. Haneman, Jr.**, has become director of the office of engineering research at Oklahoma State University. Haneman is president of Haneman Associates, Inc., Richardson, Texas, an engineering consulting firm. . . . **Byron O. Lutman** has been named area sales manager of Philadelphia and Reading for Reliance Engineering and Electric Company of Cleveland, Ohio. Lutman, his wife Nancy and four children reside in Berwyn, Pa. . . . **W. H. Baker** has been appointed manager of Contract Administration and Application Development at Bailey Meter Company. Baker, his wife, one daughter and two sons live in Mentor, Ohio. . . . **Eugene E. Wejman** has been appointed assistant to the president of the John E. Cain Company of Cambridge. He was previously with the General Electric Company in Pittsfield and Milwaukee. . . . **James Prigoff** recently won his fifth U.S. Squash Tennis Title. This should make him the most famous athlete in our class. I'm sure that his early experience was gained on the squash courts at M.I.T. . . . **Hubert I. Flomenhoft** has received the Doctor of Technical Sciences degree from the Swiss Federal Institute of Technology of Zurich, Switzerland, where he studied from 1961 to 1964 under an NSF graduate fellowship and, subsequently, under a North American Aviation full study fellowship. He is currently an advanced systems project engineer at the Columbus Division of North American. . . . Several classmates have expressed an interest in helping out with plans for the twentieth reunion next year. **Robert F. Danner**, manager of manufacturing at the Raytheon Space and Information Systems Division, was one of the recent volunteers. . . . I received a welcome letter from **Dick O'Donnell** who related some of his escapades over the years. He has stumbled upon various classmates, including **Parker Symmes**, who was on a chartered ski flight to Europe 12 years ago. He also ran into **Bill Wiehl** and his wife Pam on another ski adventure that was Dick's way of helping his wife celebrate their 11th wedding anniversary. . . . I have a stack of address changes which I'll save to fill up space when the news runs low. Unfortunately, we missed the last issue because Jan sold me on spending some time under the sun in the Florida Keys. The tan is wearing off very fast and I'm trying to prolong it with as much week-end tennis as time permits. That's all for now.—**Martin M. Phillips**, Secretary, 41 Avalon Road, Waban, Mass. 02168

## '48

The Climax Molybdenum Company Division of AMAX (American Metal Climax, Inc.) has named **Pierre Gousseland** Vice-president—European Operations. Mr. Gousseland, who is headquartered in Paris, will be responsible for direction and coordination of Climax's sales and market development offices in the European area as well as its molybdenum conversion plant nearing completion at Rotterdam, Holland. Sales or development offices are located in Paris, London, Zurich and Dusseldorf. Mr. Gousseland holds degrees from the French National School of Mines and the Paris University Law School and did graduate work at M.I.T. He joined Climax in 1948 as a metallurgical development engineer, and has held a succession of management posts relating to Climax activities in Europe. He and his family reside at Le Chesnay, a suburb of Paris. . . . **Richard S. White**, President of Automation Engineering Laboratory, Inc., Stamford, Conn., is sitting at the top of a company literally bursting at its seams because of growth. AEL now occupies three locations in Stamford and has bought land for a new plant in nearby Wilton, Conn. The new quarters will ultimately house 400 engineers and 400 administrative and manufacturing personnel. With all this, Dick has still found time to take a national position on matters of automation. He is vice-chairman of the Industry Advisory Committee, a national policy-recommending body of leading businessmen. Dick also recently addressed a U.S. Chamber of Commerce Symposium on Foreign Competition; his subject was "The Promising Role of Automation in Equalizing Costs." Dick and his family recently moved within New Canaan to a beautiful pillared Georgian home on Oenoke Ridge. . . . **Albert H. Bryan, Jr.**, manager of Raytheon's Huntsville, Ala., Operation since June, 1964, has recently been named manager of the Southern Regional Government Marketing Office, which will cover an 11 state area from Florida through Texas. From 1952 to 1958 he was chief of Army Rocket and Guided Missile Agency's Projects Staff at Redstone Arsenal. In late 1958 he was assigned as Chief of Research and Engineering at ARGMA. Bryan has held several top engineering and management positions since joining Raytheon in 1959. He is a member of the American Institute of Aeronautics and Astronautics, American Ordnance Association, and Association of the U.S. Army. He and his family live at 1005 Cole Drive, Huntsville, Ala.

**Harold B. Abramson** has been re-elected to the Young Leadership Cabinet of the United Jewish Appeal. Mr. Abramson has served the Jewish Community Council of Passaic-Clifton as 1964 General Campaign Chairman and as Chairman of Initial Gifts and has held office in the YMHA and the Beth Israel Hospital. . . . **Charles W. Adams** has been named a session chairman for the 1966 Spring Joint Computer Conference to be held in Boston, Mass., from April

26-28. He will chair a panel discussion related to "time-sharing," a recent major development in computer technology. The conference is one of two sponsored annually by the American Federation of Information Processing Societies to encourage exchange of information on advanced developments in computer-related fields. Adams is the president of Charles W. Adams Associates, Inc., and Keydata Corporation, Cambridge, Mass. He and his wife, Shirley, have five children: Keith 10, Hilary 8, Bruce 6, Stephanie 4, and Scott 2. . . . **Maurice Rifkin** has been named head of the National System Analysis Department of Mitre's Defense Communications Agency Division in Arlington, Va. Maurice, his wife and four children live in Fairfax, Va. . . . **M. Sgt. William Henderson** recently received his fifth Good Conduct Medal while assigned to the 1st Armored Division at Ft. Hood, Texas. . . . **Prof. W. D. Kingery** is again in the news as editor of the proceedings of an international conference on glaciology, which was held at M.I.T. in 1962. Not only is he the editor, but he also the co-author of some eight of the 46 papers involved.—**Richard V. Baum**, Assistant Secretary, 1718 E. Rancho Dr., Phoenix, Ariz; **John T. Reid**, Assistant Secretary, 22 W. Bryant Ave., Springfield, N.J.; **Robert R. Mott**, Secretary, Kent School, Kent, Conn.

## '49

By the time you read this, it should be the middle of the summer and I sincerely hope that you are enjoying what you are doing: such as lazily watching the boiling wake behind your new yacht. Anyway, it will have been some time since February, which is when a fine article about **Charlie Jordan** appeared in Car Life Magazine. In it Charlie talks about his work and explains the sort of career a talented young man might expect in it. An introductory note states: "A graduate of M.I.T., Chuck won the top award in the Fisher Body Craftsman's Guild model car competition back in 1947 when he was a sophomore. In 1949 he went to work for G.M. as a junior stylist. At 26 Chuck was appointed chief designer of the Special Projects Studio. In 1957, he became chief designer of the Cadillac Styling Studio. Chuck attained his present position in 1962 and is responsible for the exterior design of all G.M. cars and trucks." In the article (really an interview), Charlie emphasizes that despite G.M.'s size, the company goes all out to keep people from being lost in the maze and that as a result esprit de corps is high. . . . **Tony Gabrielle** has been elected National Director for the Eastern Region of Eta Kappa Nu. Tony is assistant head of the System Operating Division, American Electric Power Corporation, in New York City.

Herewith follow more 15th Reunion Questionnaire gleanings: **Bob McConaughy** and wife Justine live with their two children, Nancy and Wendy, in Baldwin, N.Y., where he is a project engineer with Grumman Aircraft. In that position he has recommended the hiring of some 40 individuals and suggested that two be

permitted to search for more understanding employers. Bob got a master's degree in applied math after leaving Tech and has been with Grumman exclusively since then. . . . **Ken McGrath** lives in Attleboro, Mass., with his wife Christine and children Michael, Alan, and Barbara. Ken is manager of the materials laboratory for L. G. Balfour Company which, as I recall, is the company which made our class rings. Ken enjoys boating, golfing, and wood working and, like a lot of us, has put on weight with the years (in this case 35 lbs.). . . . **Marvin Zimmerman** is a member of the staff at M.I.T.'s Lincoln Laboratories. He and his wife Inez live with their children Daniel, Wendy, and Karl in Lexington, Mass. . . . **Stuart Powell** is marketing manager for the Hayden Publishing Company and lives with wife Djuna and children Christie and Meredith in Old Greenwich, Conn. He has hired numerous persons and sent an equal number in search of more satisfactory employment. In 1964 Stu didn't own a major part of his company but was thinking of starting a business before the next reunion. . . . **Tom and Mary Toohy** live in Rye, N.Y., with their children Linda and Sandra. Tom lists his occupation as petroleum special representative with IBM and this would mystify most people except that I remember hearing Tom explain that he helps the oil people to use computers in their operations.—**Fletcher Eaton**, Secretary, 42 Perry Drive, Needham, Mass. 02192

## '51

Now that our fifteenth reunion is just a matter of record, I hope that everyone found it to be a very pleasant and successful weekend. On to the 20th. . . . In the news, **Eugene Babb** has been selected for the 1966-1967 Sloan Fellows Program at the Institute. Eugene lives in Encino, Calif., and works for Hughes Aircraft. . . . I have a very strange run of news this month: most of the items have to do with classmates who have the distinction of having their surname begin with the letter 'S'. So: **Raymond Sangster** is director of research at General Telephone and Electronics Laboratories, Bay-side, Long Island. Raymond received his Doctor's degree in Chemistry from M.I.T. . . . Prof. **C. L. Searle** (M.I.T.) is a member of the IEEE subcommittee on Frequency Stability. . . . The **Siegels**, **Hal** and **Connie**, **Brandy**, **Sandy**, **Marc**, etc. on up to number six, report that there haven't been any twins for a while. In fact, the top four children are in school now—4th grade on down. **Connie** still does some free lance illustrating and **Hal** has found himself with a new company for the third time in 14 years. This is particularly significant when one considers that he has never changed jobs! This era of acquisition and merger has changed **Hal's** affiliation even though he is still with the same outfit that he joined upon graduation. He is now program manager of the **Polaris** Missile trainer for Link Group GPI. **Hal** is active in town politics (Greenbelt, Md.), Civil De-

fense, Lions, and Jaycees. . . . **Alan Stenning**, Professor and Chairman of the Department of Mechanical Engineering at the U. of Miami (Florida) since 1961, became Professor of Mechanical Engineering at Lehigh University this past Fall. Dr. Stenning is a member of the board of Northern Research and Engineering, and is a consultant to Pratt and Whitney Aircraft. . . . **James Shepherd** spoke before the New York Advertising Club a short while ago on "How to Build a Low Budget Computerized Order Entry System." Jim is assistant comptroller of National Distillers and Chemical Corporation. . . . **Ed Stringham** is president of Penetryn Systems, Chatham, N.Y. and, at last count, had a family of three boys and a girl. . . . **Dan Sullivan** is director of development for Mental Hygienic Facilities Improvement Fund. This organization is building over 400 million dollars worth of new mental hospitals and schools for the retarded. Dan has built a new contemporary house for his family in Greenwich, Conn., but spends summers running "Dunetop" in North Eastham (Cape Cod), and he just started "Salt Palm Estate" at Nevis West Indies; can't you see the retirement pattern emerging? Dan commented that Louise and the children are turning into little Conrad Hiltons! . . . **Paul Sanders** is space division planning manager at Boeing. He is a private pilot and owns a Cessna 180 float-plane which he uses for fishing trips to Canada. Paul is president of the Federated East Side Club of King County, Wash., the largest federation of community clubs in that state, and has served M.I.T. as Chairman of the Area Fund Drive in '65 and on Area Special Gifts in '66. Paul and Helen have two boys and a like number of girls. . . . **L. Kent Schwartzman** is president of Pacific Communications and Electronics, Palo Alto, Calif. Len produces equipment for data transmission and logging, and "is always looking for good technical people." He and Jacqueline (Lovko) were married in 1960 and have one youngster, Lee Ann, a little over two years old. . . . **Bert Schweizer** moved faster than I could catch him, but fortunately he caught up with me. I learned that he was professoring at the U. of Arizona, wrote to him, and found out that he is now a professor in the math department at the U. of Massachusetts. Bert and Judith and David (2½) live in Amherst. . . . **Harold M. Sharaf** is president of Tenco Electronics; he and Dorothy have three daughters: Judy, Joyce and Janet, and live in Cohituate, Mass. . . . **Henry J. Sherman** is president of Sherman Geophysical, Inc. (lots of presidents in amongst the "S's") and lives in Tulsa, Okla. . . . **Bill Stanfield**, wife Page, and daughters Sharon and Susan (10 and eight respectively), live in Dallas where Bill is program manager at LTV Electrosystems Corporation. Bill received an M.S. from Southern Methodist in 1962. . . . I really shouldn't get carried away with a good thing, so I'll report only this last "S": **Malcolm Stuart** and **Mary Lou** are living in Bellevue, Wash., where he is lead engineer for equipment installation for the jet transport prototype project in the R & D de-

partment of Boeing's Commercial Aircraft Division.

Since it is the end of the year (for notes), let me end up with the end of the alphabet: **Erv Underwood** is associate director of research—Materials Sciences at Lockheed, Georgia. He and **Marlit** have three boys and live in Atlanta. Erv has some interesting hobbies: he composes music, plays the piano, drums, and vibraphone, collects 19th century U.S. Stamps (his specialty: color variations), plays golf and is a master at chess (once Massachusetts champion). He is currently completing a book "Quantitative Stereology;" honors and listings are too numerous to list here. . . . **Dr. Gordon Van Wylen** is dean of engineering at the University of Michigan's College of Engineering. He has been chairman of the Department of Mechanical Engineering since 1958. His honors and accomplishments are also rather extensive and include a widely used thermodynamics text. He and **Margaret** (De Witt) have five children. . . . **Herb Voelcker** sent in a philosophical note regarding the Alumni Fund and noted that he is now living in Rochester, N.Y. . . . **Jack Washburn** lives in West Hartford, Conn., but was temporarily assigned to manage a small plant opening in Savonia, Ga. (wherever that is, as Jack says). . . . **John Wozencraft** co-authored a book on "Principles of Communication Engineering." . . . **William Ward** spoke to the Los Angeles section of the AIME on Superalloys, their design and future. Bill is with International Nickel Company in Los Angeles.

And to wind up the season here are a few more names of those who have changed their addresses but have not responded to our plea for news; maybe they have changed addresses just to hide from the rest of the class. Hopefully they or their friends will see their names here and deluge us with mail (would you believe a post card?). **Joseph Flagg**, Course II, last heard from in West Acton, Mass.; **Albert Hughes**, Course VI, Buenos Aires; **Ernest Jensen**, Torrance, Calif.; **Dr. John Kalvinskis**, X, Woodland Hills, Calif.; **Barry Norris**, XVII, Pittsburgh; **Walter Rajki**, XV, Fairview Park, Ohio (I have heard that he is president of the local M.I.T. club); and **Robert Shaffer**, II, Stratford, Conn. In addition, **Donald DeMuzio**, II, Reading, Pa., and **Earl Gessler, Jr.**, XV, Deepwater, N.J. News from or about these gentlemen (or any other classmates) is always welcome.

Summer is acumen in; we wish you all a pleasant season and look forward to re-joining you in the fall—and beseech you again to please send news; if you won't we'll fictionalize the whole darn column. Best regards—**Howard L. Livingston**, Secretary-Treasurer, 358 Emerson Road, Lexington, Mass. 02173; **Forest Monkman**, Assistant Secretary-Treasurer, 6331 Beverly Drive, Mission, Kansas

## '52

This will be the last July issue of the Review before our Fifteenth Reunion next June at the Wychmere Harbor Club



(formerly Snow Inn) in Harwich Port, Mass. Some time ago, **Dana Ferguson** asked me to write these notes, so here goes: **Larry** and **Mary Garthe** with daughters **Liz**, 11, and **Cameron**, eight, and son **Marshall**, five, by now should be in the Phoenix area. After leaving Honeywell some five months ago, **Larry** became affiliated with General Electric and about two months ago accepted an invitation to relinquish the Boston area for sunny Arizona. He is working in design work for the Advanced 600 Systems Series. **Larry** relays that the job is to specify the broad goals of software and hardware for GE's biggest line. While scouting the Southwest before his move, **Larry** reports that he ran into **Paul Van Alstyne** in Las Vegas. It turns out that **Paul** is selling computers in the San Francisco area for Scientific Data Systems.

**Bill** and **Doris Hawe** recently moved **Ricky**, 1, from Sherman Oaks, Calif., to Commack, L.I., N.Y. **Bill** transferred from the field to the home office of Veeco Instruments Inc. in Plainview where he is technical services manager. At a Marketing Seminar Program sponsored by the Alumni Center of New York, **Bill** reports that he met five other 1952-ers: **Joe Henahan**, **Leo Landers** (who was studying for his doctorate in Chemistry while we were carefree undergraduates), **Gabriel Palmero**, **Dirk Plummer** and **Charlie Poppe**. Write in, fellows, and tell us about yourselves!

**Howard Harding** has left Data Services in Boston to become Marketing Manager of Lodging Engineering, Inc. in Auburn, Mass. . . . **Sandy** and **Nancy Isaacs** are living amongst the towering conifers in Weston with **Julia**, six, **Daniel**, five, **Wendy**, 1½, and **Emily**, ½. **Sandy** left Wolf Research about 15 months ago and now is with the State Street Bank in Boston and working with its computers. **Sandy** reports that he met **Dick Lacey** recently. **Dick** is with Varian Associates in the Boston area. His work is primarily with atomic frequency standards (or super accurate clocks, as he puts it), and recently he spent two months in California. While there, he came upon **Don Grine**, who is managing a group at Stanford Research Institute which is investigating the shock wave effects of bomb blasts. On the same trip **Dick** found out from **Phil Schirm**, who is now with Siliconics in Sunnyvale, that the latter will be in Little Rock, Ark., during much of this summer in the course of setting up a new plant there. Incidentally, **Dick** reports in addition that **Joe Holloway** is now with Varian here in the East.

**Al Kandel** has left Sanders Associates to become assistant to the President of Electro-Mechanisms, Inc., a manufacturer in Methuen, Mass., of flexible printed circuitry and other advanced packaging systems for the electronics industry. His new job has taken him more into the field than before, and I gather that this is a necessary part of learning new aspects of an even newer and very fast-growing business. **Al**, **Fran**, and their three daughters live in Nashua, N.H. and somehow both parents find time to renew themselves continually through evening courses and teaching assignments. Bravo!

Incidentally, you may be hearing from a local classmate during the months ahead for, as Reunion Chairman, I asked **Al** if he would serve as National Area Chairman and consider that the Class is most fortunate to have his acceptance. His job will be to build a nationwide organization that will encourage interest in and will maximize attendance at the Fifteenth. It will be a good one—write the dates down now—June 9-11. More later in this article.

**Sandy Kaplan** was featured as the "Builder of the Week" in the April 24 issue of the Boston Sunday Herald. According to the Herald, his Sanford Construction Company, only eight years old, builds about 61 homes annually in the Massachusetts towns of Bellingham and Franklin. **Sandy**, though, does much more than just build homes. As one of the newer board members of the Greater Boston Home Builders Association, he is filling three Chairmanships simultaneously. The organizations within the HBA that he directs are the Legislative Committee, the Public Relations Committee, and the Data Processing Committee. **Sandy**, **Phyllis**, and their three children live in Newton Center. . . . **Arnie A. Kramer** graced a local production of "Hamlet" with his characterization of Laertes, recently. Worcester hasn't been the same since. Seriously, **Arnie** as one of the few remaining bachelors of the Class must have enjoyed the role greatly, judging from his ever-abundant enthusiasm. During the work day he holds dual jobs as Vice-president of Production at the Mechanics Upholstering Company and as Treasurer of Lark Sales Company, a related sales organization, and "off duty" he is president, among other things, of the M.I.T. Club of Central Massachusetts.

**Bill McKinley**, after two years in the Air Force following graduation, joined Raytheon and has been with them since. **Bill** recently was made department manager of the Equipment Division and is concentrating in typical fashion on mastering the job. His wife, **Sue**, at last word, was working for her Masters degree in chemistry in an experimental program initiated by the NSF at Wellesley College. **Sue** plans to utilize this means of updating herself in the field of teaching. . . . **Bill Moss**, formerly in industrial engineering, then accounting, followed by marketing, now is a general management consultant with the Management Service Division of Ernst and Ernst in Atlanta. As **Bill** says, "I can't think of any job that is pleasanter than telling people what is wrong with them—and getting paid for doing it!" Sounds as if things are humming in the Southeast. . . . **Brad** and **Sally Schofield** live with **Lesley**, 12, **Bradford**, nine, **Jeffrey**, six, and **Heidi**, two, in Belmont, Mass. **Brad** is senior project engineer at Lessells and Associates in Waltham and somehow finds time to attend the Suffolk Law School two nights a week. He wants to be able to feel comfortable when his firm finds itself involved in patent law work. That, I gather, is often.

**Dick** and **Joyce Silverman**, probably because offspring **Mark**, 12, **Peter**, nine, and **Amy**, four, have a way of making

their home seem small, have added a bedroom and bath up, and an enlarged living room down, in their Weston home. Some years ago, **Dick** gave up his own consulting firm to become director of warehousing and transportation with Elm Farm Foods in Brighton, Mass. . . . **George Stetson** has moved to New Jersey where he is associated with Curtiss Wright as a Project Engineer. **George**, like **Arnie**, is another of '52's remaining "eligibles," and I gathered that he is enjoying very much the extensive traveling that his new assignment entails. **George** wrote to volunteer his services on behalf of the Fifteenth—and spoke enthusiastically in favor of holding our Fiftieth Reunion at Montego Bay in Jamaica! Sounds great, but as the late R. J. Reynolds used to say, "The champion potato-peeler is the man who peels them one at a time."

**Bob** and **Jacqueline Trenn** live with daughter, four, and sons, two and ½, in Brookline. After receiving his M.B.A. at Harvard, **Bob** went with High Voltage Engineering until recently when he became affiliated with the Investment Research Department of the National Shawmut Bank in Boston. . . . For now, that is about it concerning news about specific classmates. But there is lots more to be published—needed only are the inputs. Send yours today to **Dana Ferguson**, at 242 Great Road in Acton, Mass. . . . And, finally, a progress report on the Reunion. You know of the place, Wychmere Harbor Club, and the dates, June 9-11. Those so far on the Committee, besides yours truly, are **Burge Jamieson**, Publicity; **Stan Sydney**, Treasurer; **Russ Olive**, Registration and Reception; **Herb Eisenberg**, Banquet; **Al Kandel**, National Areas; **Stan Buchin**, Questionnaire. Others have already volunteered their assistance and will be put to work as soon as assignments can be defined. Please, if you find that you have some time beginning in the fall to help make 1952's Fifteenth what it can be, pass the word to any of those shown above. And in the meantime, have a most enjoyable summer.—**Douglas F. G. Haven**, 29 Martin Road, Wellesley, Mass.

# '54

Summer's dearth of information has arrived early this year. **Thomas J. Henderson**, II, who is currently the general manager of the building division of the Guy F. Atkinson Company of South San Francisco, has been elected to the Board of the Eleanor H. Woods Family Service Agency of San Mateo County. The Agency is a United Fund supported group which has been traditionally a counseling agency. **Tom**, who is also a member of the specifications committee of the Associated General Contractors, will be working on the program committee. . . . **Jack H. Vernon**, XV, has been promoted from assistant to the president to production manager at the Instron Corporation. He lives with his wife and three daughters in Weston where he is a member of the School Committee. . . . Two of our classmates, **Robert H. Brown**, II, in Old Greenwich,



Conn., and **Rolf Kates**, VI-A, in Framingham have served as Regional Chairmen of the 1966 Alumni Fund. For some reason we are quite under-represented: the two classes on either side of us have from 2.5 to 6.5 times as many regional chairmen.

About the time you read this, we will be on our way to Tokyo where I will be a visiting professor of labor economics and industrial relations at the Institute of Management and Labor Studies at Keio University. Should any of you be in Tokyo during the next year, please stop by and say hello. I have enjoyed serving these past two years, but I have missed receiving letters from all but a few of you. Therefore, when you put the magazine down, pick up a pen and post card and send the secretary a note. It can be about a new job, house, child, etc., the important thing is that we hear from you. Send them to me or our President. Sayoonara.—**Bob Evans**, Secretary, 43 High Street, South Acton, Mass. 01771

## '56

These notes are being written in mid-May. Questionnaires returned now total 310 and members of the class should be congratulated for their greatest participation in any Tech event since graduation. Must have been those postage free return envelopes because dues collections are way behind at 180 contributors—still less than our fifth year. Paidup registrations for the reunion stand at 130 and a final total of over 150 seems a certainty. Thus, attendance should be 50% above the level of the fifth. . . . **Bob Carlson** has been appointed an Assistant Professor at the Harvard Business School. Bob has been teaching at Columbia and Roberts College in Istanbul after receiving a masters and doctorate at Stanford. . . . **Irwin Dorros** has been appointed Assistant Director of the Transmission Engineering Planning Center at Bell Labs. Irwin will direct systems work on the Picturephone and network television transmission. . . . **Joel Ewen** has been appointed Chairman of the Department of Switching at the University of Cauca, Popayán, Republic of Columbia. Joel has taken a leave of absence from Communications Systems Inc. of Paramus, N.J. Previously, he had worked for Adler-Westrex Communications, Telefonbau and Normalzect, and Western Electric. . . . **Larry Jacowitz** writes that he joined the Federal Systems Division of IBM last January and now lives in Huntsville, Ala., where he is working on the Apollo Program. Larry and Barbara have a daughter Renée. . . . **Bob and Joan Malster** were blessed with a son, Jon Lindsay on April 14.—**Bruce B. Bredehoft**, Secretary, 16 Millbrook Road, Westwood, Mass. 02090

## '57

This is the last column until November. The news is particularly voluminous this month as a result of the mailing to

you of information on the Class Reunion next June. **Mal Jones**, who is chairman of the Reunion Committee, gave me help by enclosing a request for gossip. Before telling you what I learned, here are a few notes on the Reunion. Place: Jug End in the Berkshires, near South Egremont, Mass. Date: June 9 through 11. Those serving with Mal on the Reunion Committee are **Hugo Liepmann**, Treasurer; **Art Aznavorian**, Secretary; **Bob Green**, Publicity; **Ron Keefe**, Registration and Reception; and **Bill Alcorn**, Program—Entertainment, Sports, etc. **Ed Roberts** will be compiling class statistics. **Gary Dischel** is an ex-officio member of the committee, sans portfolio. . . . Among those who have already indicated that they plan to attend the Reunion or hope to attend are **Don Aucamp** ("Am currently killing myself working after hours on a Ph.D."), **Richard Baird**, **Ken Beckerman**, **Bob Berg**, **Andy Blackman**, **Lee Bredbenner**, **Mike Brenner**, **Ed Bryson**, **Alan Budreau**, **Jules Byron**, **Don Calabro**, **Paul Carr**, **Pierre Cathou**, **Ben Chertok**, **Dick Child**, **John Christian**, **Bill Fleischer** ("My wife, Barbie, three children and I have been back in New York City area for over a year following a year in St. Louis. I'm still with Ingersoll-Rand Company, presently as manager of industrial tool sales for the U.S. **Hal Miller** and family are in Japan on a temporary assignment. **Ben Inserra** and family visited us recently; they are building a home near us on Long Island."), **Edward Friedman** of Course V ("Married Harriet Carol Gold on June 5, 1960, received Ph.D. in Chemistry from Harvard in 1962; daughter born October, 1961; in U.S. Army 1962-1963; worked at W. R. Grace and Company in Maryland until 1965; now at Avco Space Systems Division in Lowell, Mass."), **Bob Gal**, **Harry Gildea**, **Boyd Givan** ("Received MBA from University of Washington in 1959 and joined Arthur Andersen and Company; received CPA certificate in 1960; moved to New York in 1963 with Martin Marietta as operations analyst; now back in Seattle with Boeing as research analyst—financial systems; married with two children."), **Alan Godes** ("I am assistant to the Senior Vice-president of St. Johnsbury Trucking Company, Inc. We are expecting our third child in July."), **Trond Kaalstad** ("I am going back to M.I.T. in June to brush up on computers in Civil Engineering and take part in a research project."), **Alan May** ("Every member of the class of '57 in Midland, Texas, is solidly behind this reunion."), **Gerson Meyers**, **Michael Myers** ("During the months June 1964 to January 1965, I was in U.S.S.R. as a Russian-speaking guide and technical advisor at the United States Information Agency exhibit, 'Communications U.S.A.' which toured the cities of Leningrad, Kiev, and Moscow. On the way back I got married in Berlin. I'm now living in Boston, working at Adcom, Inc."), **Kendall North**, **John Pacinda**, **John Rinde**, **Bob Rosin**, **Jack Safirstein**, **Monk Salzhauser**, **Gerald Sapers**, **Joel Schiffman** ("I just finished my residency in orthopedic surgery and have just been called up in the medical draft. I expect to be shipped to Vietnam short-

ly. Our second daughter was born in March."), **Howard Schumacher**, **Herbert Schwartz**, **Barney Silver**, **Lloyd Sutfin** ("I am returning to M.I.T. this summer to study in the Oral Science Program."), **Norman Tepley**, **Bob Walter**, **Tom Whitehouse** ("I went to Warner and Swasey Company in 1957, went through a training program and then worked in design, with, incidentally, **Bob Mansperger**, '56, and **Gil Lutz**, '53. In 1960 I went to Rotor Tools, Division of Cooper Industries, as field research engineer, a staff job reporting the vice-president of engineering. In 1963 I joined and helped form Stanley Air Tools, Division of Stanley Works, New Britain, as manager of engineering. This is a new division, starting right from scratch with the first line on paper—after buying the paper. It has been a real challenge and seems to keep me busy. I'm also temporarily general foreman in the shop. I was married while still at Tech, in 1956, still happily, and have two boys.")—**Frederick L. Morefield**, Secretary, c/o John A. Morefield Company, Inc., 35 N. 35th St., Camp Hill, Pa.

## '60

**Bruce Karnopp** and his wife Paula were in Boston visiting his brother; Bruce is assistant professor of mathematics at the University of Toronto. My not very efficient spies at the Spring Joint Computer Conference—the lack of efficiency being attributed to the generous offerings of various exhibitors and publishers—reported seeing the following members of the class of 1960 there: **Dave Butterfield**, who is working for IBM in Worcester; **Betsy Schumacker**, who is working for IBM in the Boston area (we also saw Betsy at A-Ball this year); **Norm Goldman**, now Assistant Director of the Boston University Computing Center; **Addison Ball**, **Tom Farquhar** and **Mike Padlipsky**. . . . **Sue Schur** had a showing at the M.I.T. Faculty Club last week; she showed a number of oils and some pen and ink sketches. . . . News from General Food Corporation—**Tom Fazzina**, working for Maxwell House Labs, is now senior group leader in the coffee research lab. He started in 1960 as an associate technologist and moved up to section head in 1964. . . . **Charles Beede** has been promoted to research chemist at Johnson and Johnson in New Brunswick, N.J. . . . **Hal Dodds** received his Ph.D. in Chemistry from Michigan State University at the end of the winter term.

**Joseph Goldstein** is a co-winner of the Ninninger Meteorite Award at Arizona State University; the award is given for the best student papers in the academic year 1964-65. . . . **Ralph Cuomo** has been promoted to manager of systems and programming at the Bay State Abrasives Division of Avco. Ralph has been at Avco since 1964; he holds a masters degree from the Harvard Business School. His primary responsibility will be the planning and developing of future computer applications and programs. . . . News of the **Spragues**—we aren't going

to move after all; we've decided to take our chances with the Inner Belt for just one more year. If any of you see the plans for that ill-fated highway, we live 40 feet from the Belt itself, directly on one of the access roads. So if you're around this summer, drop by and have a drink while you tell us what you've been doing all these years.—**Linda G. Sprague**, 345 Brookline St., Cambridge, Mass. 02139

## '61

Not too much to report this month. Just the odds and ends left over after a year. **Chuck Lane** left M.I.T., diploma in hand, directly into the clutches of the Navy. 'Til 1962 he was at the Puget Sound Naval Shipyard as an assistant ship superintendent. This was followed by a stint on the USS Watts (ole DD567) as a damage control assistant. Done with the sea, Chuck returned to civvies and the Stanford Graduate School of Business, getting an MBA in 1965. Now he is a systems analyst in the Comptroller's Department of Standard Oil of New Jersey and lives in New York City. . . . **Robert Hofland** wasn't able to get to the festivities at Clauson's because of Doctoral Candidate Exams the following week-end. (But he didn't say where!) Anyhow, hope everything went well, Bob. He went on to state: "First child arrived! February 11—Susan Renee; wife (Nancy) and baby doing fine. My NASA traineeship is to be continued until the Ph.D. is awarded. Degree in Aero expected in January or at latest June 1967. Pipe organ studies continuing under tutelage of H. W. Stuart, head of the Fine Arts Department."

An anonymous spy in the class sent us word about **Richard Chang**. He obtained his Ph.D. in Applied Physics from Harvard last fall, and now has been appointed assistant professor of Physics at Yale starting this September. He is the father of one son and one daughter. . . . **Fred Haessler**: "I'm still working for Metropolitan Life Insurance Company (Group customer relations—got promoted to a junior account coordinator last July). I married the former Elizabeth Shera on the day she graduated from Wellesley (June 8, 1964) and we had our first daughter this year (January 1, 1966—she was the first one in town). Also, I joined the National Guard in 1962 and got my 2nd Lt. bar in 1964. That's five years in one paragraph!" . . . I see **Tony Lewis** quite often (he is doing his thesis in the same lab my wife, Helen, works in.). He is in the final stages of a thesis in Physics and will certainly be off the unemployed lists by this time next year. The other day Tony slipped me an article from some South Dakota Paper that tells of **George Gladfelter's** activities. George got in the paper by being appointed "full-time director of the South Dakota School of Mines and Technology's Computation Center." The article goes on to say that he had been doing work on operations research at the Denver Mining Research Center of the U.S. Bureau of Mines in Denver. During George's stay with the

Army he was a programmer at the Academic Computer Center for about two years. It's better than South East Asia.

A press release from the Air Force tells that **Dwight Kennard** is this year's co-winner of the Air Force's Chief of Staff Award at the Air University's Squadron Officer School at Maxwell AFB, Ala. This award "is presented to the student section judged most outstanding in Scholastic and Athletic competition." A second press release tells of Dwight's migration west to Hamilton AFB in California where he is in MATS. And he is a Captain, now. . . . Dupont's PR department let us know that **Hank Schleinitz** attended Cambridge U. and got a Ph.D. in 1965. Thereupon he joined DuPont's Plastics Department near Wilmington. . . . Another chemist in our class, **Edward Grabowski**, is a senior research chemist at the Merck Sharp and Dohme Research Labs in Rahway, N.J. Ed got his Ph.D. from the University of Rochester on a fellowship from Eastman Kodak. . . . Finally, a clipping from the Hartford Times tells that **Samuel Lord**, who works for Phoenix Mutual Life Insurance was named an associate actuary of the Society of Actuaries in January. . . . And that's it for a year. It's been a pleasant year for me, seeing my golden words in print. Give your next Secretary as much cooperation as you've given me and there should be a full column every month. If you missed the reunion and something interesting has happened in your family recently drop me a line and I'll pass it along to the proper authorities —**Andrew Braun**, Acting Secretary, 1038 Beacon Street, Brookline, Mass. 02146

## '62

**Fran Berlandi**, who received his M.S. in 1964 will receive his Ph.D. in Nuclear Chemistry from the University of Michigan this spring. Fran is now a Lt. in the U.S. Marines waiting for assignment to active duty. He co-authored a paper entitled "Application of Controlled Potential Electrode Position with Pyrolytic Graphite Electrodes to Neutron Activation Analysis and Radiochemistry" for the magazine Analytical Chemistry. . . . **Jan T. Hyde**, who is just graduating from Harvard Business School with his M.B.A., will be going to work for Hurd and Company, an investment banking firm in New York City. Hurd and Company secures equity and debt financing for major real estate projects and performs other financial services. . . . **Roger Rowe** received his M.S.E.E. from M.I.T. in 1963. He then reported to the Navy and was assigned to the flagship for the commander of the Sixth Fleet. This ship's home port is in the Mediterranean at Villefranche-sur-Mer, France. Needless to say, Roger managed to spend considerable time on the Riviera. The ship also visited Beirut, Athens, Naples, Venice, Genoa, Barcelona, Lisbon, Palma de Majorca, Casablanca, and Tangiers—not a bad itinerary. He says that his ship did not dump the oil in the Bay of Cannes, but also mentioned that the beach was the cleanest it had ever been after the Navy cleaned up

the mess it had made. In September, 1965, Roger returned to civilian life and is working at the Itek Corporation in Lexington, Mass. He reports that he enjoys the skiing and attended the wedding of **Charles Bruggemann** to the former Miss Judith Skinner of Needham Heights. Charles is now enrolled in a doctoral program in metallurgy at the University of California at Berkeley. That's the kind of newsy letter that warms a class Secretary's heart, but unfortunately come very few and far between.

Apparently my mild hint about getting organized for next year's reunion had pleasingly rapid results. A Fifth Year Reunion Committee has been formed consisting of **Edward H. Linde**, Chairman, **Joe Perkell**, **John Prussing**, **B. T. Tucker**, **John Costello**, and **Murray Sachs**. The committee has met and is now busily engaged looking for a reunion site. Any other class members who would like to offer assistance, ideas, or just moral support should write to Ed Linde at 851 Coventry Lane, Norwood, Mass. . . . Due to popular demands, I will discontinue my "Hawaiiana" series, especially in light of the fact that by the time this article appears I may have been promoted to assistant manager of West Coast Operations for Oceanic and transferred to our San Francisco office. If so, Linda, Pamela, and I will live in Santa Clara for the time being. Have a good summer—**Jerry Katell**, Secretary, Oceanic Properties, Inc., 401 Kamae St., P.O. Box 2780, Honolulu, Hawaii 96803

## '63

The last two months have brought only one letter. **Peter Mlynaryk** writes that he is with Douglas Aircraft in California. He was working on control systems for hypersonic vehicles, but is now with the Advanced Systems Technology group. Last February he received his MBA from the University of Southern Calif. . . . **John Castle** is with Donaldson, Lufkin, and Jerrette, a Wall Street firm. He is a security analyst specializing in technological industries. . . . **Steve Kaufman** is in the Detroit area where he is the assistant to the president of the Grand Manufacturing Company. . . . It is my sad duty to report that **Thomas B. McRann** died on March 17 this year.—**Bob Johnson**, Secretary 1089 N.E. 97 Terrace, Miami, Fla. 33138

## '64

This month three classmates have attained the rank of Class Hero by sending news of themselves and others for this column. They are Alan Gamse, Mike Morrissey, and Jack Moter. Alan and Jack deserve special citations for including the whereabouts of others.

**Marcus Cohen**, who received his S.B. in E.E. at Tech, is now working on the technical staff in the Systems Division of Watkins-Johnson Company in Palo Alto, Calif. He had previously worked with the Military Electronics Department of G.E.



... **Steve Dreier** is now working for Westinghouse in Baltimore, having received his S.M. in Industrial Management last June. Steve had been playing rugby with the Balto Rugby Club, but a reliable source said he broke his nose in April and was out of action for a while. ... **Doug Floyd** is in his second year at Stanford Law School, doing extremely well and working on the Law Review. ... **Alan Gamse**, the reliable source, reports that he has been elected to the Editorial Board of the Maryland Law Review at their School of Law. This summer he will be working for the U.S. Attorney in Baltimore. ... **Larry Hendricksen** had been working for the long-lines division of A.T. and T. in White Plains, and is now in their office in Framingham, Mass. He became a father for the second time last January. ... **Bruce McGregor** was an IBM civilian until Uncle Sam made him a 2nd Lieutenant. After a few months in the Signal Officers School, they put him in the Pentagon with the Data Support Command. ... **Mike Morrissey** sent a very cute card announcing a seven pound, 13 ounce addition by the name of Jill Michelle on April 22. Mike and Beryl are living in Mineola, Long Island. ... **Jack Moter** spent last year at Berkeley getting his M.S. in E.E. He reports the weather is great for tennis, which made the year go by quickly. Last July he married his pinmate from Wellesley, Jutta Paalbery, and they are now living in Arlington, Mass. He is working for Raytheon in Bedford, doing logic design work on the Nike-X system. ... **Bill Schwarz** was also married last year and is now working for A.T. and T. in Andover, Maine. ... **Howard Straus** was married in December, and is now a systems engineer with IBM.

By the time this issue is out, I will be married myself and working in Memphis for the summer. The next column will not be until November, and I hope to hear from many of you before then so we can begin the next series of issues with a large column. After September 1 my address will be Holden Green, Apt. 202A, Cambridge, Mass. 02138. Have an enjoyable summer!—**Ron Gilman**, Secretary, 2227 Vollintine Ave., Memphis, Tenn. 38108

## Graduate Students

With this issue The Technology Review begins publication of a section on graduate students who hold advanced degrees from M.I.T. and were not undergraduates at the Institute. Notes on graduate students will be arranged according to department; for Course VI we are pleased to have Professor Karl L. Wildes, '22, as correspondent.

Professor Wildes joined Professor Gardner in the E.E. Graduate Office in the fall of 1945 after 17 years as Faculty Counselor to third and fourth year students, working with Professor Timbie in the administration of Course VI-A. While in

the Graduate Office he handled most of the correspondence with prospective graduate students in E.E. from American schools and from abroad. He worked with Professor Tucker and with the directors and managers of the various research laboratories to place these students in teaching and research assistantships. During his 16 years in the Graduate Office he established personal acquaintance with a large proportion of graduate students and took a special interest in those from foreign countries, many of whom continue in correspondence with him. Professor Wildes is now retired but continues to teach the introductory subjects in networks and electronics.

## Course VI

**Bruce B. Barrow**, E.E. '56 is manager of the Sylvania Electronic Systems Division of Sylvania Electric Products, Inc. in Waltham, Mass., and chairman of the Boston Section, Institute of Electrical and Electronics Engineers. His return to the Greater Boston Area in 1962 followed a very interesting sequence of events. Employed by Hycon Eastern in 1956, he was transferred to Paris in 1957 in connection with a company contract with SHAPE. In 1958 he joined the SHAPE Technical Centre in The Hague, and was engaged in investigations in Data Transmission and Tropospheric Scattering. During this period he also completed requirements for the degree Doctor of Technical Science cum laude at the Institute of Technology at Delft, Holland. In 1959 he was one of the organizers of the Benelux section of the Institute of Radio Engineers, the first of a succession of IEEE sections to be organized in Europe.

**John L. Wilson**, S.M. '48, has recently returned to the Greater Boston area as general manager of the Honeywell Radiation Center, Honeywell's research and development facility for military radiation components and systems. His field of activity includes avionics, radar, meteorology, electro-optics and lasers. Retired as Colonel after 20 years in the Army Signal Corps, Mr. Wilson joined Honeywell in 1961 as manager of the Gemini inertial guidance program. Prior to his present position, he was director of Space Systems in the Company's Aeronautical division in St. Petersburg, Fla. Having served in Europe during the second world war, he entered M.I.T. in 1947 as a Major, studying under the sponsorship of the Signal Corps. He attended the Command and General Staff College in '51-'52 and the Army War College '56-'57, after which he spent a year in Korea. From '59 to '61 he was director of Surveillance in the Signal Corps Engineering Laboratories and Commanding Officer of the Evans Laboratory. The Wilson family has a new home in Dover, Mass. His daughter has just received the Master's degree in Economics from Florida State and will enter Michigan State for doctoral study in the fall. His elder son is studying Civil Engineering at his Alma Mater, Georgia Tech, and his younger son is in Dover High School.

**Robert F. Nease**, S.M. '53, Sc.D. '57 and **John C. Pinson**, S.M. '54, Sc.D. '57

are with Autonetics in Anaheim, Calif. Bob is chief scientist of the Minuteman Division and John is chief scientist of the Navigation Systems Division. Bob is on the Board of Directors of the Anaheim YMCA and especially enjoys, with his eight-year-old son Bobby, the activities of Indian Guides, a group of boys and their fathers sponsored by the Y. It was good to see John this spring when he came back to M.I.T. on a recruiting mission. ... **Lawrence E. Broniwitz**, S.M. '61, E.E. '63, Sc.D. '66 has recently joined Autonetics. ... **Michael Strieby**, Sc.D. '55, paid a visit to the Electrical Engineering department in March while recruiting for Hughes Aircraft Company, Canoga Park, Calif., where he is manager of the Advanced Projects Laboratory of the new division called Missiles Systems. His work involves the inception and preliminary design of new missile systems. Earlier he was with Ramo-Wooldridge and North American and taught Linear Systems at UCLA.

**Henry A. Sandmeier**, S.M. '52 and E.E. '54 has been with the Los Alamos Scientific Laboratory in New Mexico since 1963. He is currently Visiting Professor of Nuclear Engineering at Purdue University where he expects to spend the greater part of 1966. In December he delivered some lectures at the Eidgenossische Technische Hochschule in Zurich, Switzerland where he had completed doctoral requirements in the summer of 1954. He returned to the United States in January to take up his duties at Purdue.

... **Thomas Kailath**, S.M. '59, Sc.D. '61 attended the recent Computer Conference in Boston. He is associate professor of Electrical Engineering at Stanford University, where he teaches Communication Theory and Information Theory. Mrs. Kailath has just returned to Karala in South India and Tom plans to join her there in the early summer. He will be with the Statistical Institute in Calcutta during the summer, the whole family returning to Stanford in the fall. Tom was with the Jet Propulsion Laboratory of Cal Tech for a year immediately following his period of study at M.I.T. ... **Isao Asai**, S.M. '61, E.E. '62 will be especially remembered by his M.I.T. friends for his fine color slides and motion pictures and his various Japanese cameras. He returned to Japan following his M.I.T. studies to work with his former employer, Hokushin Electric Works, Ltd. in Tokyo. His company has an exchange arrangement with Fischer and Porter Company of Warminster, Pa., where Mr. Asai is now on this exchange assignment and resides with his family in Hatboro, Pa. ... **F. Ralph Kotter**, Sc.D. '55, came to M.I.T. in 1947 from the National Bureau of Standards where he had been employed for several years in the field of precise electrical measurements. He returned to the Bureau of Standards following his doctoral study and is now chief of the High-Voltage Section, where he is concerned with research and measurements at high potentials. He is also interested in the development of new materials and in high-energy physics.—**Professor Karl L. Wildes**, Room 4-232, M.I.T., Cambridge, Mass.



## Club News



### Sarasota Alumni Hold Annual Spring Picnic

The Club of Southwest Florida ended its 1965-66 season with its Annual Spring Picnic on Sunday, April 24. The following alumni and friends of M.I.T. met at Bill Grunwell's "Breezy Acres" near the Englewood Beach just south of the Sarasota County Line: Mr. and Mrs. Arthur L. Shaw, '09; Mr. and Mrs. Sam E. Rogers, '13; Mr. and Mrs. Emory Kemp, '16; Mr. and Mrs. Vincent Panettiere, '17; Col. and Mrs. Granville B. Smith, '18; Mr. and Mrs. Henry L. Nash, '20; Mr. and Mrs. Robert Robillard, '20; Mr. and Mrs. Leon S. Wright, '20; Mr. and Mrs. Lowell Holmes, '23; Mr. and Mrs. G. G. Kearful, '24; William R. Grunwell, '28; and Mrs. Betty Van Cleave; Mr. and Mrs. Carl W. Rahn, '34; Eugene S. West, '40, and Mrs. Vera Hayes; Mr. and Mrs. David A. Eberly, '49. The Eberlys marshalled the food; Lowell Holmes served as emcee in absence of the Club's President, Ben Groenewold, '25, who was island jumping in the Pacific. The Kemps represented the Club in Cambridge at the 50th Anniversary of the Class of 1916. The next meeting will be held in September.

### Denver Alumni Elect New Officers

The Rocky Mountain chapter took the occasion of their spring dinner-dance meeting to elect officers for the forthcoming year. The new officers slate will be headed by Johnson Mossman as the new president. Johnson is recently returned from an exciting trip to Jakarta, Indonesia, where he was consulting on operation of a local oil refinery. The state of affairs in Indonesia lent some anxious moments to Johnson and his American companions. They were forced to cut their trip short when local troops began threatening to close the airport and deny incoming and outgoing traffic the privilege of its use. His trip included stops at North Sumatra, Hong Kong and Tokyo.—John A. Baring, Secretary, c/o Minneapolis-Honeywell, Inc., P.O. Box 5227, Denver, Colo.

### Professor Sizer Talks to Delaware Valley Group

The M.I.T. Club of the Delaware Valley held its annual Spring Dinner Meeting at the Wilmington Country Club, Wilmington, Del., on May 14. After an informal afternoon of touring the gardens of Winterthur and Longwood Gardens, dinner was enjoyed at the Country Club by 120 members and guests. Afterward an informative and enjoyable revelation of the history, progress, and directions of molecular biology was given by Professor Irwin W. Sizer, Chairman, Department of Biology, M.I.T. An invigorating question and answer session followed the talk, cen-

tering on enzyme synthesis and the legal, religious, and economic impact of creating living organisms in the laboratory.—Jack A. Raymond, Assistant Secretary, 794 Penlllyn Pike, Blue Bell, Pa. 19244

### Samuel Groves and G. Elliott Robinson Visit London Alumni

The Club met, some 60 strong, at Imperial College, London, on May 4, to enjoy the company of Samuel A. Groves (President of the Alumni Association) and G. Elliott Robinson (Member of the Alumni Council), and their wives. The visitors were passing through London and the Club was indeed fortunate that their visits overlapped by a few days.

Mr. Groves and Mr. Robinson showed pictures of M.I.T. as it is today and answered questions for as long as the members felt it right to keep them. It is many years since the student days of most of us, and few of us have been back lately. We heard of many things about student life (which seems tougher even than we remember), of the growing proportion of women students, of increasing concern with sport (when there's time) and, not least, but inevitably, of the multiplying activities of the computer. We were most impressed by the pictures of the new buildings, of which many of us hitherto had only heard, and we all of us wished that we could see them and use them. Our thanks are due to our distinguished guests and our good wishes went with them for their journey home. Dr. D. N. Truscott ('48), President of the Club, was in the Chair; Stephen Barrett, '39, the Club's Honorary Secretary, was everywhere.—Theodore S. Durrant

### Indianapolis Alumni Hear About Voyage on "The Seven Seas"

33 Alumni, wives and other guests dined at Mike's Steak Haus on Wednesday evening, April 20. Afterward our own J. Ray Ramsey, VI, '17, showed us pictures and described the trip around the world which he and his Betty took on the motorship, "The Seven Seas," late last year and early this year. The passengers included a few other retired folks like the Ramseys but largely were students and instructors of the University of the Seven Seas. The trip was eastward through the Mediterranean, Red Sea, Indian Ocean and the Pacific. The Ramseys took some side trips into Europe, saw the Mediterranean countries, Thailand, some of India, and Hawaii.

President Fay announced that plans for the rest of the year included a picnic at Morse Reservoir on June 5, a program on church architecture by Eleanor Dorste for September or October and one in December by Professor Charles Kindleberger of the Institute.—Thomas G. Harvey, Secretary-Treasurer, 5685 N. Delaware St., Indianapolis, Ind.

### Future of Southern California Discussed in Los Angeles

The March 22 general meeting featured presentations to approximately 100 members and guests on the future of Southern California by a distinguished panel of authorities, including representatives from State of California Vehicle Pollution Control, Los Angeles Metropolitan Water District, North America Aviation, Inc., and our own S. E. Lunden. Key issues and forecasts were discussed covering smog, water supplies, transportation systems, and city planning.

A special meeting was convened to honor President-designate Howard W. Johnson at a reception and dinner on May 2. Some 50 members and their wives were privileged to share an informal and candid discussion of M.I.T. by its new president.

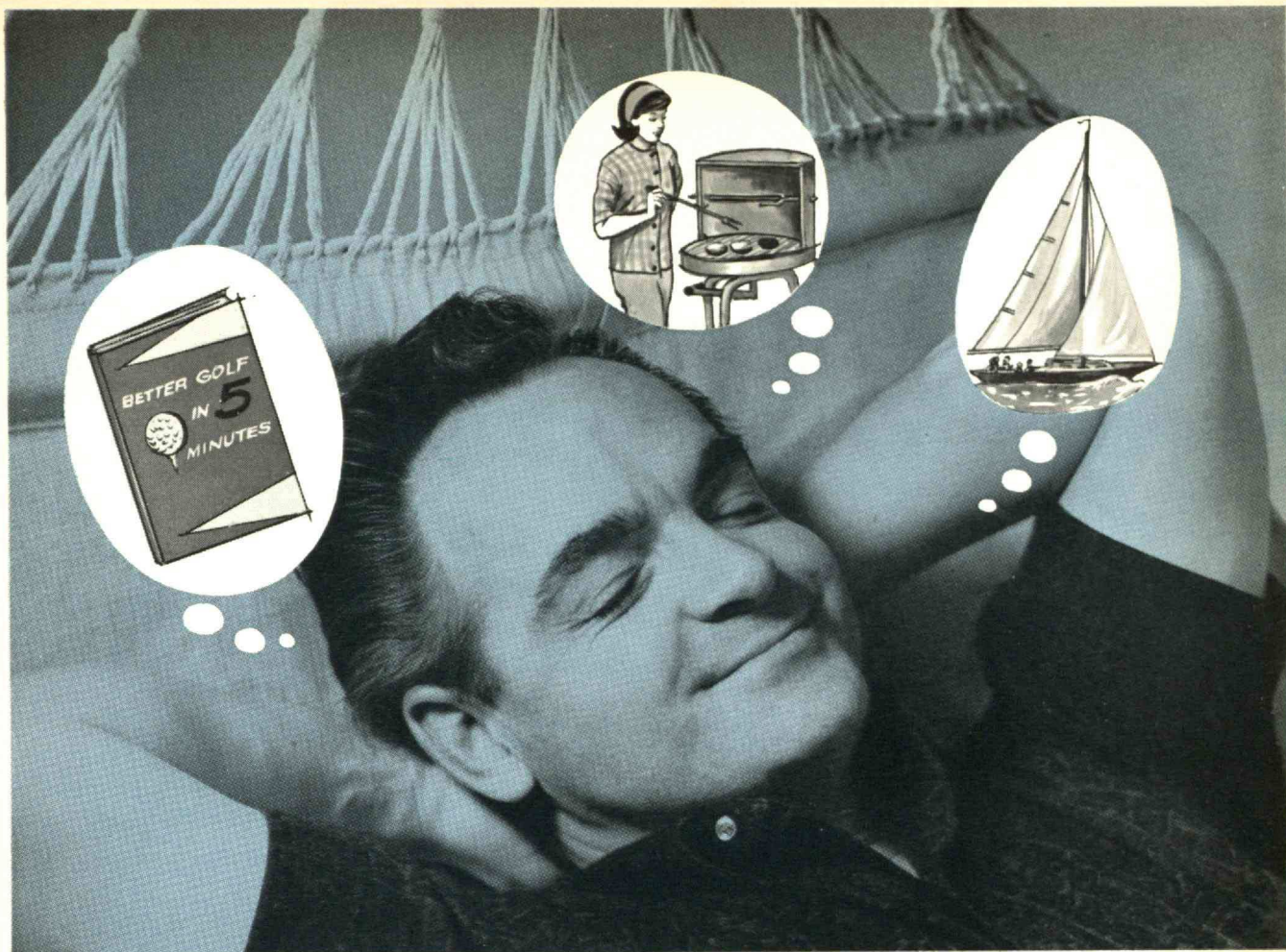
The May 14 general meeting consisted of a field trip for members and their families to Universal City Studios, including a special technical lecture on film making. Our First Vice-president and Program Chairman, George M. Cunningham, '27, has other attractive events in the planning stages.—Robert K. Wead, Secretary, 22361 Kittridge St., Canoga Park, Calif. 91304

### Dr. Killian Addresses Toronto Alumni

The highlight of this season's program of the M.I.T. Club of Ontario was the visit to Toronto on May 3 by Dr. and Mrs. J. R. Killian. Dr. Killian's day included a luncheon at the University of Toronto with Dean V. W. Bladen and Professors J. M. P. Hume and D. G. Ivey, both of whom are involved with curriculum changes in physics. After lunch Dr. Killian was taken on a tour through the University of Toronto by Dean Bladen and, later that afternoon, was involved in a press conference with reporters from our local newspapers.

In the evening Dr. Killian was guest speaker at an M.I.T. Club of Ontario meeting at the Granite Club in Toronto. His subject was "Innovations in Education," under which he spoke about the variety of changes currently taking place in both the content and the format of secondary school teaching. These developments are an outgrowth of original work done by the Physics Science Study Committee at M.I.T. under Professor Jerrold R. Zacharias. This year, for the first time, all grade 13 physics students in the Province of Ontario will be studying the P.S.S.C. course. Approximately 600 to 700 schools are involved in this curriculum change. Dr. Killian spoke also about curriculum changes in the social sciences, and about those organizations which have arisen for the purpose of doing research into new teaching and educational concepts. Dr. Killian's talk was accompanied by an exhibit by Educational Services, Inc., from Boston. Our Club was shown two movies, demonstrating the new teaching concepts that Dr. Killian spoke about. Dr. Killian's visit to Toronto brought out more M.I.T. Alumni than had been present at any recent Club meeting.—Alan Kotliar, Secretary, 494 Avenue Rd., Toronto, Ontario, Canada.





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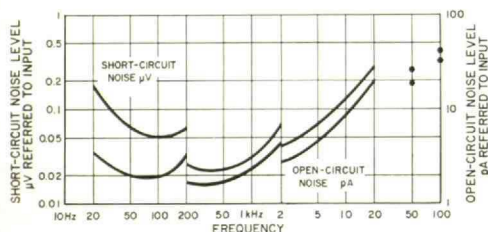
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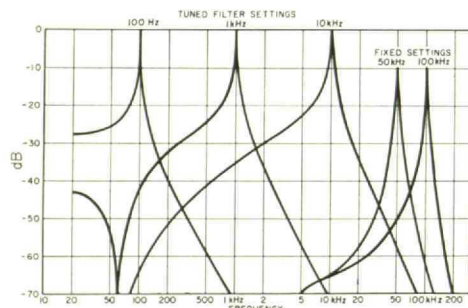
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